



Live and Dead Centers



Catalog #70 - 2003



Selection Guide

Selecting a Riten center is a great start toward getting the right center – one that will perform to your expectations and meet your needs. To ensure that you get the appropriate center for your application, here are some basic things to consider.

1. Do you need a live or dead center?
2. What is the taper of the shank?
3. Is it for a manual lathe, CNC lathe, or grinder?
4. Will the application run at greater or less than 1000 RPM?
5. What is the weight of the workpiece?

6. Which center will place the workpiece in the right position for the best fit?
7. If you need greater accuracy than our standard centers provide, please call our Technical Support staff for more information.

If you don't have all of the answers to these questions, call us **(800-338-0027)**. Riten Technical Support will gladly help you select the right center for your application. Our knowledgeable and caring support staff will share with you technical information that may help you get better service and more life from your Riten center.

Selection Guide

Use the Selection Guide below to help determine which center is best for your application. It will give you an overview of the center's specifications and the availability of tapers and points.

CODE: X = STANDARD (STOCK) O = OPTIONAL (4 WEEK DELIVERY)				APPLICATION CNC LATHE MANUAL LATHE GRINDER	AVAILABLE TAPERS MORSE JARNO BROWN & SHARPE STRAIGHT	AVAILABLE POINTS STANDARD TRACER LONG CARBIDE CHANGEABLE BULL NOSE PIPE NOSE								PAGE		
SERIES	SPECIFICATIONS RPM W.P. WT. TOLERANCE															
SPRINT	6,000	2,900	± .0001	•	X	O	O	O	X	X	X	X	O	O	O	3-5
QUICK-POINT	6,000	1,400	± .00025	•	X	O	O	O	X	X	O	O	X	X	O	6
CNC HEAVY DUTY	3,000	14,000	± .0002	•	X	O	O	O	X	X	O	O	O	O	O	7-8
CNC DEAD	Dead	Dead	± .0001	•	X	O	O	O	X	X	X	X	O	O	O	9-10
LIGHT & X-LIGHT	8,000	10 or less	± .0001	• • •	X	O	O	O	X	O	O	O	O	O	O	11
MULTI-USE	5,000	1,100	± .0001	• •	X	O	O	O	X	O	X	O	O	O	O	12
SPRING LOADED	5,000	5,500	± .0001	• • •	X	X	X	X	X	X	X	O	O	O	O	13-14
BELL HEAD SPRING LOADED	5,000	5,500	± .0001	• • •	X	X	X	X	O	O	O	O	O	X	X	13-14
PIPE NOSE	4,500	4,500	± .00025	• •	X	O	O	O	O	O	O	O	O	O	X	15
SPLINE ROLLING	—	—	± .00025		X	O	O	O	X	O	O	O	O	O	O	16
ECONO-TRI-BEARING	2,500	900	± .0002	•	X	O	O	O	X	X	O	O	O	O	O	17-18
REGAL	4,000	1,100	± .0001	• •	X	O	O	O	X	O	X	O	O	O	O	19-20
ADVANTAGE	5,000	1,400	± .0001	• •	X	O	O	O	X	X	X	O	O	O	O	21-22
HEAVY DUTY	4,000	14,500	± .0001	•	X	X	O	O	X	O	O	X	O	O	O	23
EXTRA HEAVY DUTY	3,000	22,500	± .0002	•	X	O	O	O	X	O	O	X	O	O	O	24
HEAVY DUTY BULL NOSE	2,500	15,000	± .00015	•	X	X	X	X	O	O	O	O	O	X	O	25
SUPER ACCURATE	1,000	6,000	± .00005	• •	X	X	X	X	X	O	O	X	O	O	O	26
M. D. SUPER ACCURATE	1,000	6,000	± .0001	•	X	X	X	X	X	O	O	X	O	O	O	27
IMPERIAL	Dead	Dead	± .0001	•	X	X	X	O	X	O	O	X	O	O	O	28
MILL TAPER	Dead	Dead	± .0001	•	O	O	O	O	X	O	O	O	O	O	O	29-30
LONG SERIES	Dead	Dead	± .0001	•	X	X	X	O	X	O	O	X	O	O	O	31
PIPE NOSE DEAD	Dead	Dead	± .0001	•	X	O	O	O	O	O	O	O	O	O	X	32
BULL NOSE DEAD	Dead	Dead	± .0001	•	X	X	O	O	O	O	O	O	O	X	O	32
HIGH SPEED DEAD	Dead	Dead	± .0001	•	X	X	X	X	X	O	O	X	O	O	O	33-34

For applications not covered on this chart see the Specials on pages 35 through 38 or call Riten Technical Support, 1-800-338-0027.



What you don't see makes the difference.

As a leading manufacturer of high-quality, high-precision live and dead centers, we know it's what you can't see on the surface of our products that's important.

Each Riten center is the end result of combining the finest engineering talent, manufacturing skills and customer service representatives available. Each center is engineered and tested to give you the high-

est accuracy and greatest service. From the through-hardened tool steel in our dead centers to the matched bearings in our live centers, our skilled machinists work to satisfy your needs and requirements.

Behind everything we do is our unique full-service repair or trade-in program (see details on page 40). We work hard so you can start and finish with the best: Riten live and dead centers.

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RITEN INDUSTRIES WARRANTY – DISCLAIMER OF WARRANTY

Riten warrants that its products shall be free from defects in material and workmanship under normal use when correctly installed and maintained. This warranty of quality shall terminate ninety (90) days after delivery of the products to the buyer and shall not apply to products which have been subjected to accident, misuse, abuse, neglect or improper storage, handling or maintenance.

THIS STATEMENT OF WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES WITH RESPECT TO THE PRODUCTS, EXPRESS OR IMPLIED, WHETHER WRITTEN OR ORAL, STATUTORY, BY OPERATION OF LAW OR OTHERWISE. THERE IS NO – AND RITEN DISCLAIMS ANY – WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE OR WARRANTY ARISING BY USAGE OF TRADE OR PERFORMANCE OR COURSE OF DEALING.

Any affirmation of fact, description, sample, model or promise made or provided by Riten, other than the aforementioned Statement of Warranty, shall not create a warranty and shall not be part of the basis of the parties' bargain.

LIMITATION OF DAMAGES – DISCLAIMER OF LIABILITY

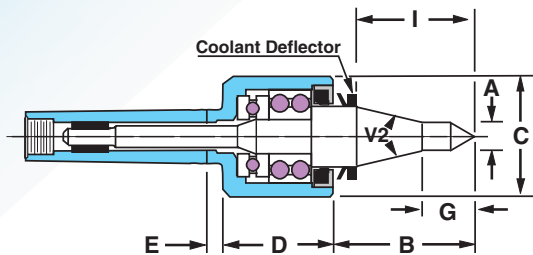
BUYER'S SOLE AND EXCLUSIVE REMEDY AGAINST RITEN FOR BREACH OF WARRANTY SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF ANY NONCONFORMING PRODUCTS, PURSUANT TO THE ABOVE STATEMENT OF WARRANTY.

RITEN SHALL NOT BE LIABLE TO BUYER OR ANY OTHER PERSON FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY LOSSES, DAMAGES OR EXPENSES, DIRECTLY OR INDIRECTLY ARISING OUT OF THE SALE, HANDLING OR USE OF THE PRODUCTS OR FROM ANY OTHER CAUSE RELATING THERETO. RITEN'S LIABILITY WHETHER BASED ON CONTRACT, WARRANTY OR TORT (INCLUDING BUT NOT LIMITED TO NEGLIGENCE AND STRICT LIABILITY) OR OTHERWISE IS LIMITED TO, AT RITEN'S OPTION, THE REPAIR OR REPLACEMENT OF NONCONFORMING PRODUCTS OR THE REPAYMENT OF, OR CREDITING BUYER WITH, AN AMOUNT EQUAL TO THE PURCHASE PRICE UPON RETURN OF THE PRODUCTS. BUYER ACKNOWLEDGES THAT IF RITEN PERFORMS UNDER THIS LIMITED REMEDY, SUCH LIMITED REMEDY SHALL NOT HAVE FAILED ITS ESSENTIAL PURPOSE.



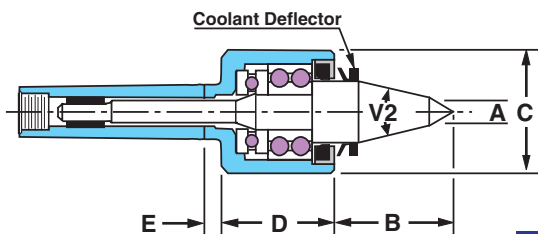
CNC High RPM Sprint Live Centers, Long Point and Tracer Point

- Accuracy guaranteed to $\pm .0001$.
- Coolant deflectors, no friction seal.
- Point configuration allows for tool clearance.
- Meets the rigid requirements of CNC turning.
- Points through-hardened to 61-63 Rc.
- Body heat-treated for additional strength.
- Riten full service and repair.



Long Point

LONG POINT MORSE TAPER											Max. RPM	W.P. Weight
Model	Taper	A	B	C	D	E	G	V2	I			
14102	2	3/8	2	2 1/8	2	3/8	3/4	40	119/32		6000	310
14103	3	3/8	2	2 1/8	2	3/8	3/4	40	119/32		6000	310
14104	4	1/2	2 1/2	2 3/4	2 5/16	3/8	3/4	40	151/64		4000	1100
14105	5	1/2	2 5/8	3 1/8	2 7/16	3/8	3/4	40	27/32		4000	1100



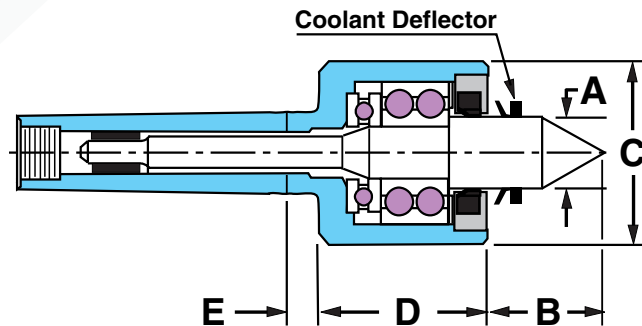
Tracer Point

TRACER POINT MORSE TAPER											Max. RPM	W. P. Weight
Model	MT	A	B	C	D	E	G	V2	I			
14905	5	5/8	29/16	3 1/8	2 3/4	3/8	-	30	-		4000	1200



CNC High RPM Sprint Standard Point Live Centers

- Accuracy guaranteed to $\pm .0001$.
- Coolant deflectors, no friction seal.
- Meets the rigid requirements of CNC turning.
- Points through-hardened to 61-63 Rc.
- Body heat-treated for additional strength.
- Riten full service and repair.

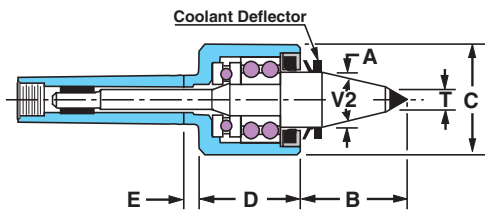


MORSE TAPER								
Model	Taper	A	B	C	D	E	Max. RPM	W. P. Weight
14602	2	1	1¼	2⅁	2	⅜	6000	440
14603	3	1	1⅜	2⅁	2	⅜	6000	1100
14604	4	1¼	1⅜	2¾	2ⅅ	⅜	4000	2100
14605	5	1ⅅ	2⅜	3⅁	2ⅆ	⅜	4000	2900

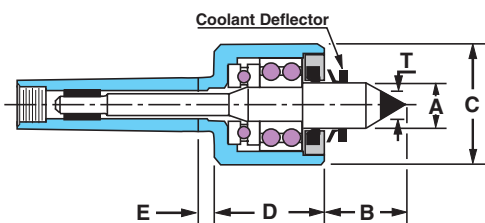


CNC High RPM Sprint Live Centers With Carbide Tipped Point

- Accuracy guaranteed to $\pm .0001$.
- Coolant deflectors, no friction seal.
- Point configuration allows for tool clearance.
- Meets the rigid requirements of CNC turning.
- Body heat-treated for additional strength.
- Riten full service and repair.



Tracer Point



Standard Point

MORSE TAPER

Model	MT	A	B	C	D	E	V2	T	Max. RPM	W. P. Weight
14192	2	1	17/8	21/8	2	3/8	25°	3/8	6000	250
14193	3	1	17/8	21/8	2	3/8	25°	3/8	6000	250
14194	4	1 1/4	21/2	23/4	25/16	3/8	25°	1/2	4000	530
14195	5	19/16	29/16	31/8	27/16	3/8	30°	5/8	4000	800

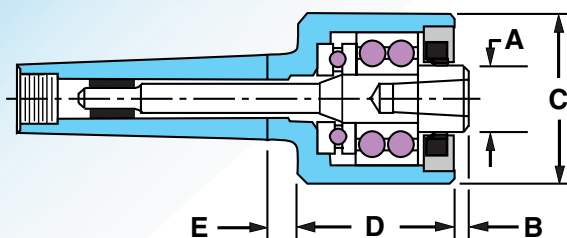
MORSE TAPER

Model	MT	A	B	C	D	E	T	Max. RPM	W. P. Weight
14692	2	1	1 1/4	21/8	2	3/8	1/2	6000	440
14693	3	1	13/8	21/8	2	3/8	1/2	6000	530
14694	4	1 1/4	113/16	23/4	25/16	3/8	7/8	4000	1000
14695	5	19/16	23/8	31/8	27/16	3/8	1	4000	1000



Quick Point Live Centers, Sets and Replacement Points

- Accuracy guaranteed to $\pm .00025$.
- Interchangeable points reduce the need for several centers.
- Purchase individual replacement points or a complete set.
- Special points are available upon request.
- Mounting taper of points is 1:10.
- Safe storage container provided when you purchase a complete set.
- Point extractor for easy removal of points is included in the set or can be purchased separately.



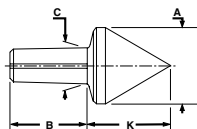
A Quick Point Set includes: one live center, one male point, one female point, one tracer point, one bull nose point, and one point extractor.

QUICK POINT SETS

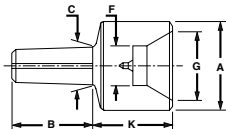
Model	Taper
49502	2
49503	3
49504	4
49505	5

POINT EXTRACTORS

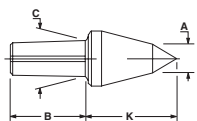
Model	Taper
49904	2, 3, 4
49905	5



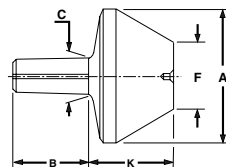
M - Male Point



F - Female Point



T - Tracer Point



BN - Bull Nose Point



LIVE CENTER*

Model	MT	A	B	C	D	E	Max. RPM	W. P. Weight
49102	2	1	1/4	21/8	2	3/8	5000	100
49103	3	1	1/4	21/8	2	3/8	5000	350
49104	4	1 1/4	1/4	23/4	25/16	3/8	4000	550
49105	5	19/16	1/4	31/8	27/16	3/8	4000	1400

*Live Center includes male point unless otherwise specified.

QUICK POINTS

Model	MT	Style	A	F	G	K	C	B
91031	2/3	M	1	-	-	13/16	.474	61/64
91032	2/3	F	1 1/8	1/2	7/8	13/32	.474	61/64
91033	2/3	T	3/8	-	-	15/16	.474	61/64
91034	2/3	BN	13/4	7/8	-	13/16	.474	61/64
91041	4	M	1 1/8	-	-	15/16	.591	13/16
91042	4	F	13/8	5/8	11/8	17/32	.591	13/16
91043	4	T	1/2	-	-	13/16	.591	13/16
91044	4	BN	2 1/4	1	-	19/16	.591	13/16
91051	5	M	1 1/2	-	-	11 1/16	.867	125/64
91052	5	F	1 1/2	3/4	1 1/4	11/4	.867	125/64
91053	5	T	1/2	-	-	2	.867	125/64
91054	5	BN	2 3/4	1 1/2	-	15/8	.867	125/64



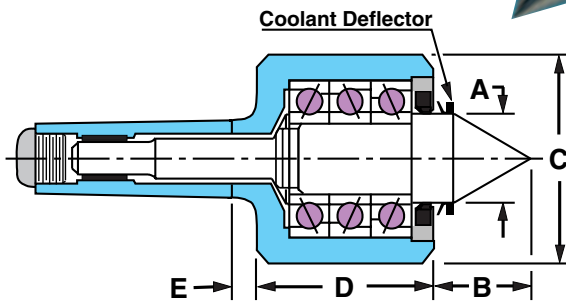
CNC Heavy-Duty Live Centers Standard Point

- Accuracy guaranteed to $\pm .0002$.
- May be used in conjunction with Face Drivers.
- Large workpieces in CNC applications.
- Riten full service and repair.

These CNC live centers are used to counter the high thrust as in face driving applications. These centers are also used where workpieces may weigh several thousand pounds. Radial pressure, thrust and rigidity requirements demand centers with four-bearing design to handle these loads.



* For detailed specifications on Riten Face Drivers, see the catalog order form on page 42.



MORSE TAPER								
Model	MT	A	B	C	D	E	Max. RPM	W. P. Weight
15103*	3	11/8	11/2	213/16	33/16	1/2	5000	3000
15164*	4	121/32	13/4	33/4	327/32	1/2	4000	4800
15165	5	17/8	21/4	33/4	327/32	1/2	4000	8000
15105	5	2	21/4	45/8	327/32	1/2	4000	14000
15106	6	2	21/4	45/8	327/32	1/2	4000	14000

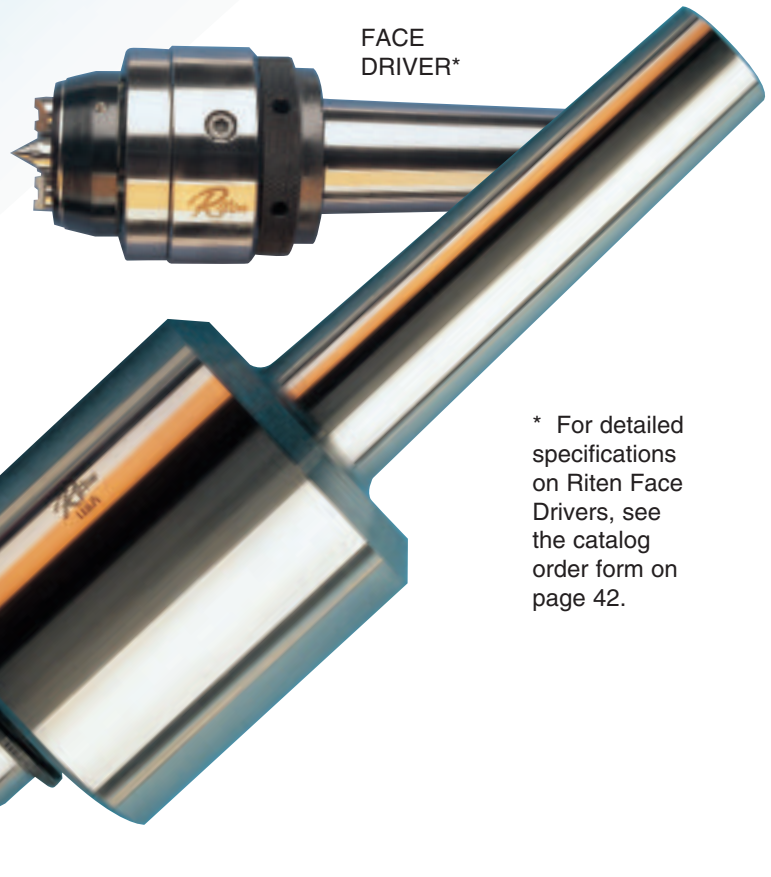
* Stub spindle design on 3MT and 4MT.



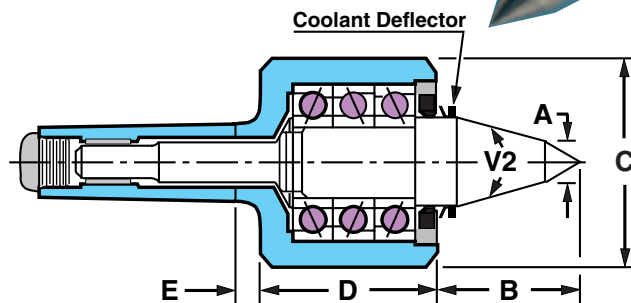
CNC Heavy-Duty Live Centers Tracer Point

- Accuracy guaranteed to $\pm .0002$.
- May be used in conjunction with Facedrivers.
- Large workpieces in CNC applications.
- Riten full service and repair.

These CNC live centers are used to counter the high thrust as in facedriving applications. These centers are also used where workpieces may weigh several thousand pounds. Radial pressure, thrust and rigidity requirements demand centers with four-bearing design to handle these loads.



* For detailed specifications on Riten Face Drivers, see the catalog order form on page 42.



MORSE TAPER									
Model	MT	A	B	C	D	E	V2	Max. RPM	W. P. Weight
16103*	3	1/2	21/16	213/16	33/16	1/2	30°	5000	1100
16194*	4	5/8	217/32	33/4	327/32	1/2	30°	4500	1800
16195	5	5/8	225/32	33/4	327/32	1/2	30°	4000	3800
16105	5	15/16	39/32	45/8	327/32	1/2	30°	4000	7100
16106	6	15/16	39/32	45/8	327/32	1/2	30°	4000	7100

* Stub spindle design on 3MT and 4MT.

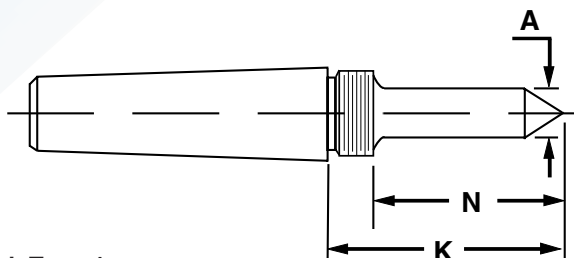


CNC Dead Centers – Steel

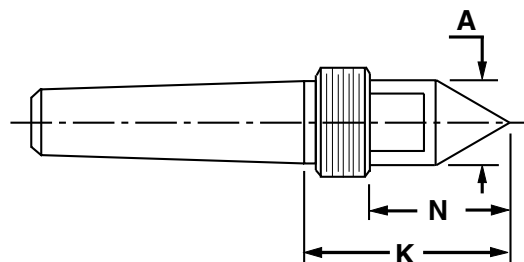
- Accuracy guaranteed to $\pm .0001$.
- Through-hardened to 61-63 Rc.
- Works on all CNC machines.
- Meets the rigid requirements of CNC turning.
- Riten full service and repair.
- All stock items.



**PLEASE
ORDER NUT
Separately**



Steel, Type 1



Steel, Type 2

STEEL, TYPE 1, MORSE TAPER					
Model	MT	A	N	K	Threads
68102	2	3/8	11/4	111/16	7/8 - 14
68113	3	3/8	11/4	111/16	7/8 - 14
68103	3	1/2	2	27/16	7/8 - 14
68123	3	3/4	2	27/16	7/8 - 14
68114	4	1/2	2	25/8	11/8 - 12
68104	4	5/8	2 1/4	27/8	11/8 - 12
68124	4	1	2 1/4	27/8	11/8 - 12
68115	5	1/2	2	2 15/16	15/8 - 12
68105	5	7/8	2 1/2	37/16	15/8 - 12
68125	5	1 1/4	2 1/2	37/16	15/8 - 12
68106	6	1 3/4	3 11/16	55/16	2 1/2 - 12

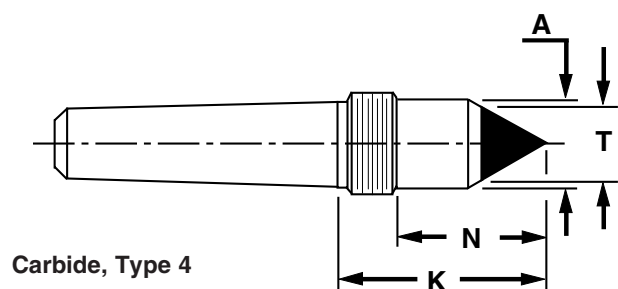
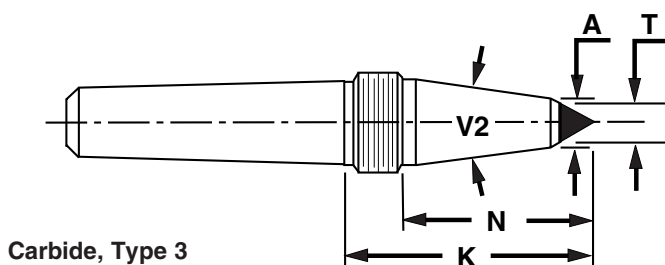
STEEL, TYPE 2, MORSE TAPER					
Model	MT	A	N	K	Threads
68603	3	1	15/8	23/8	1 1/8 - 12
68604	4	1 1/4	2 1/32	2 15/16	1 3/8 - 12
68605	5	1 3/4	2 15/32	35/8	1 7/8 - 12
68606	6	2 1/4	3 11/16	55/16	2 1/2 - 12

CNC DEAD CENTER NUTS						
Model	81031	81041	86041	81051	86051	86061
Threads	7/8 - 14	1 1/8 - 12	1 3/8 - 12	1 5/8 - 12	1 7/8 - 12	2 1/2 - 12



CNC Dead Centers – Carbide Tipped

- Accuracy guaranteed to $\pm .0001$.
- Meets the rigid requirements of CNC turning.
- Works on all CNC machines.
- Riten full service and repair.
- All stock items.



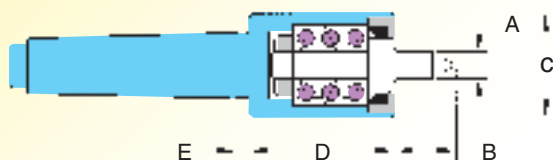
CARBIDE TIPPED, TYPE 3, MORSE TAPER							
Model	MT	T	A	N	K	V2	Threads
68923	3	3/8	1/2	2	25/8	20°	11/8 - 12
68924	4	1/2	5/8	29/32	33/32	20°	13/8 - 12
68925	5	1/2	5/8	21/2	37/16	20°	15/8 - 12

CARBIDE TIPPED, TYPE 4, MORSE TAPER							
Model	MT	T	A	N	K	Threads	
68913	3	3/4	1	15/8	23/8	11/8 - 12	
68914	4	1	1 1/4	2	229/32	13/8 - 12	
68915	5	1 1/4	1 3/4	2 1/2	321/32	17/8 - 12	



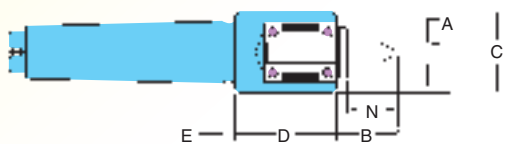
Light and X-Light Live Centers

- Accuracy guaranteed to $\pm .0001$.
- Light live center designed for 2 to 10 lb. workpiece loads.
- X-Light live center designed for extremely light workpiece loads – 2 oz. to 2 lb.
- Excellent for very small workpieces. Used in medical, orthopedic, aerospace and similar applications.
- Free turning.
- Maximum 8,000 RPM.



LIGHT LIVE CENTER - MORSE TAPER

Model	Taper	A	B	C	D	E	Max RPM	W. P. Weight
40552	2	3/8	7/8	11/2	21/16	3/16	8000	10
40553	3	3/8	7/8	11/2	21/16	3/16	8000	10
40554	4	3/8	7/8	11/2	21/16	3/16	8000	10
40555	5	3/8	7/8	11/2	21/16	3/16	8000	10



X-LIGHT LIVE CENTER - MORSE TAPER

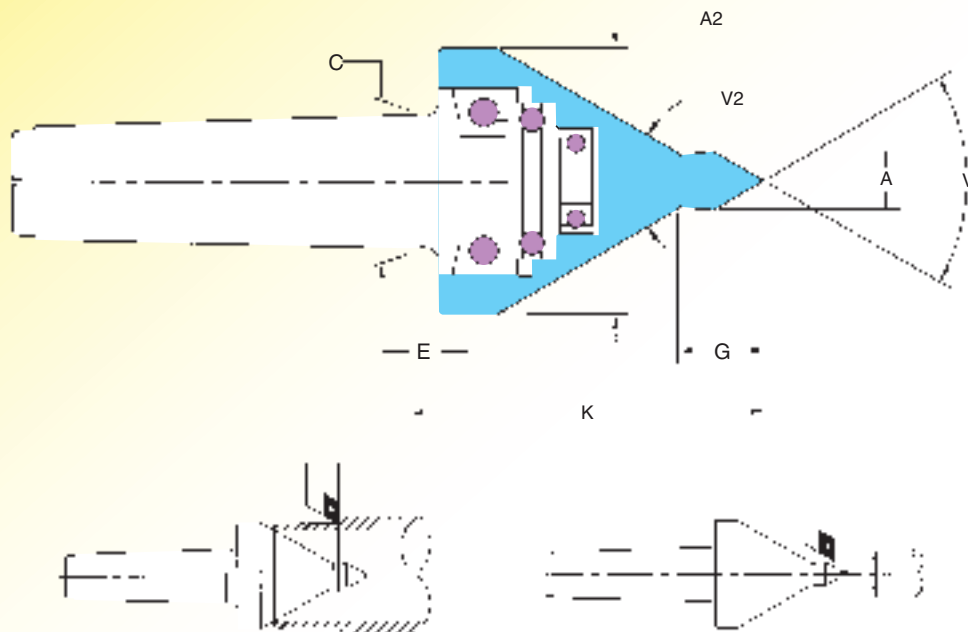
Model	Taper	A	B	C	D	E	N	Max RPM	W. P. Weight
40101	1	9/32	7/8	11/4	13/4	3/16	3/4	8000	2
40102	2	9/32	7/8	11/4	13/4	3/16	3/4	8000	2
40103	3	9/32	7/8	11/4	13/4	3/16	3/4	8000	2
40104	4	9/32	7/8	11/4	13/4	3/16	3/4	8000	2



Multi-Use Live Center

- Accurate to $\pm .0001$.
- Great for manual lathe applications.
- Riten full service and repair.

The Multi-Use live center is ideal for general machine shop use. It can be used when machining thin-walled workpieces or general shaft work applications. The versatility of this center makes it a "must have" tool when your center needs change frequently.



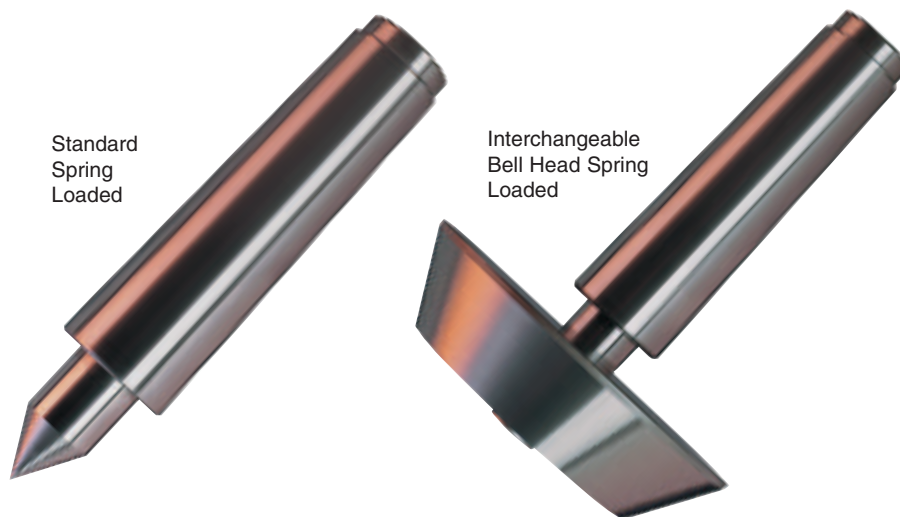
MULTI-USE LIVE CENTER - MORSE TAPER											
Model	MT	A	A2	C	E	G	K	V	V2	Max RPM	W. P. Weight
60222	2	1/2	21/4	.700	1/4	3/4	33/16	60°	60°	5000	330
60223	3	1/2	21/4	.938	1/4	3/4	33/16	60°	60°	5000	330
60263	3	5/8	25/8	.938	1/4	15/16	33/16	60°	60°	4000	685
60264	4	5/8	25/8	1.231	3/8	15/16	37/8	60°	60°	4000	685
60354	4	3/4	31/2	1.231	3/8	11/8	37/8	60°	60°	3500	1165
60355	5	3/4	31/2	1.748	3/8	11/8	45/8	60°	60°	3500	1165



Standard Spring Loaded and Interchangeable Bell Head Live Centers

- Accuracy to $\pm .0001$.
- Compensates for thermal expansion.
- Low profile.

Concentric Tool Corporation, now a member of the Riten workholding family, pioneered and patented the streamlined low profile design of high precision spring loaded live centers. The low profile design has less overhang, added load capacity, and increased rigidity. The spring loaded spindle compensates for workpiece expansion or contraction.



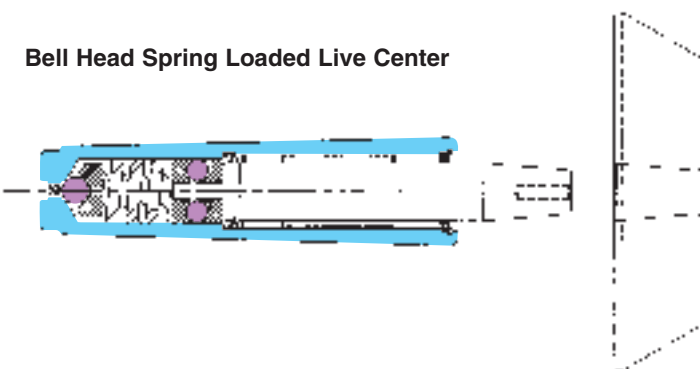
Standard Spring Loaded Live Center



STANDARD SPRING LOADED LIVE CENTER

Type	A	B	K
II	.378	.88	1.38
III	.558	1.16	1.69
IV	.686	1.38	2.38
V	1.075	2.00	2.88
VI	1.509	2.75	3.63

Bell Head Spring Loaded Live Center



Standard Spring Loaded Live Centers*

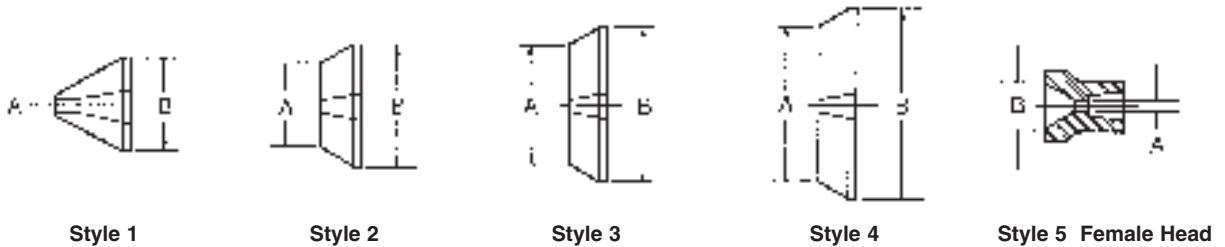
TYPE II		TYPE III		TYPE IV		TYPE V		TYPE VI	
Taper	Part No.	Taper	Part No.	Taper	Part No.	Taper	Part No.	Taper	Part No.
2 MT	17102	3 MT	17103	4 MT	17104	5 MT	17105	6 MT	17106
7 B&S	17407	9 B&S	17409	10 B&S	17410	12 B&S	17412	15 B&S	17415
8 B&S	17408	8 Jarno	17208	11 B&S	17411	13 B&S	17413	16 B&S	17416
6 Jarno	17206	9 Jarno	17209	10 Jarno	17210	14 B&S	17414	20 Jarno	17220
7 Jarno	17207	1 SS	17303	11 Jarno	17211	14 Jarno	17214	22 Jarno	17222
5/8 SS	17301	11/16 SS	17304	12 Jarno	17212	16 Jarno	17216	21/4 SS	17309
3/4 SS	17302	11/4 SS	17305	11/2 SS	17306	13/4 SS	17307	21/2 SS	17310
						2 SS	17308	3 SS	17311

* Standard long points available

Bell Head Spring Loaded Live Centers

TYPE II		TYPE III		TYPE IV		TYPE V		TYPE VI	
Taper	Part No.	Taper	Part No.	Taper	Part No.	Taper	Part No.	Taper	Part No.
2 MT	17122	3 MT	17123	4 MT	17124	5 MT	17125	6 MT	17126
7 B&S	17427	9 B&S	17429	10 B&S	17430	12 B&S	17432	15 B&S	17435
8 B&S	17428	8 Jarno	17228	11 B&S	17431	13 B&S	17433	16 B&S	17436
6 Jarno	17226	9 Jarno	17229	10 Jarno	17230	14 B&S	17434	20 Jarno	17240
7 Jarno	17227	1 SS	17323	11 Jarno	17231	14 Jarno	17234	22 Jarno	17242
5/8 SS	17321	11/16 SS	17324	12 Jarno	17232	16 Jarno	17236	21/4 SS	17329
3/4 SS	17322	11/4 SS	17325	11/2 SS	17326	13/4 SS	17327	21/2 SS	17330
						2 SS	17328	3 SS	17331

Interchangeable Bell Head Adapters



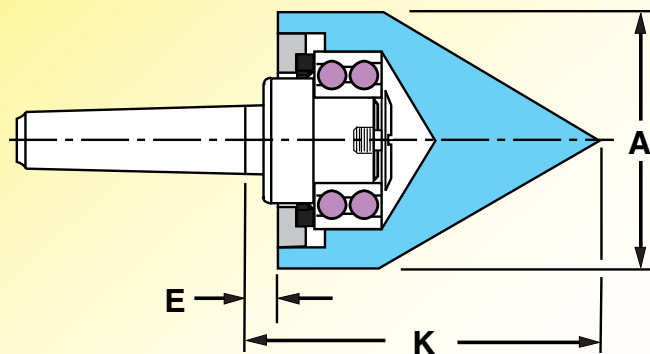
	STYLE 1			STYLE 2			STYLE 3			STYLE 4			STYLE 5		
Center Type	Part No.	A	B	Part No.	A	B	Part No.	A	B	Part No.	A	B	Part No.	A	B
II	00231	0.25	1.31	00232	1.24	1.82	00233	1.75	2.33	00234	2.26	2.84	00235	0.13	0.76
III	00331	0.35	1.83	00332	1.72	2.58	00333	2.46	3.32	00334	3.20	4.06	00335	0.19	1.12
IV	00431	0.36	2.27	00432	2.17	3.25	00433	3.14	4.22	00434	4.11	5.19	00435	0.23	1.37
V	00531	0.51	3.33	00532	3.21	4.80	00533	4.60	6.19	00534	6.06	7.65	00535	0.38	2.00
VI	00631	0.61	5.08	(Contact factory for availability).											



Pipe Nose Live Centers

- Accuracy guaranteed to $\pm .00025$.
- For use with pipe, tubing and thin walled piece parts.

Designed for use in machining pipe, tubing and other thin wall work-pieces. One center fits a wide range of sizes. For the best support and chatter-free parts, choose a center where the part will seat as close to the large diameter as possible.



Jarno,
Brown & Sharpe,
and Straight Shanks
Available

MORSE TAPER					
Model	Taper	A	E	K	W. P. Weight
65252	2	2 1/2	5/16	33/4	260
65253	3	2 1/2	5/16	33/4	260
65254	4	2 1/2	5/16	33/4	260
65353	3	3 1/2	7/16	429/32	1500
65354	4	3 1/2	7/16	429/32	1500
65355	5	3 1/2	7/16	429/32	1500
65453	3	4 1/2	7/16	47/8	1500
65454	4	4 1/2	7/16	47/8	1500
65455	5	4 1/2	7/16	47/8	1500
65555	5	5 1/2	3/8	65/16	4500
65556	6	5 1/2	3/8	65/16	4500

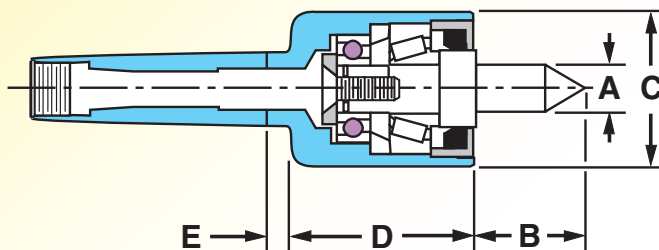
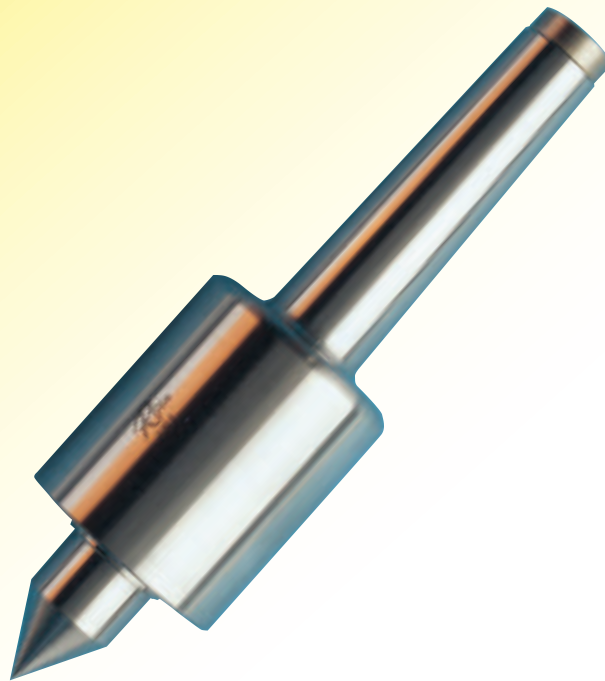


Spline Rolling Live Centers

- Accuracy guaranteed to $\pm .00025$.
- Tapered and ball bearings.
- Points are through-hardened to 61-63 Rc.
- Riten full service and repair.
- Special applications.

Spline Rolling Centers are special application centers. Their design includes heavy-duty taper and roller bearings. The heat-treated points extend the life of the center. Lubrication is sealed in and no additional lubricant is required.

Prompt deliveries on special points including female, cupped, long point, or radius end from semi-finished inventories. The Spline Rolling Center is available in heavy-duty design to meet difficult applications.



MORSE TAPER							
Model	Taper	A	B	C	D	E	W. P. Weight
46103	3	7/8	13/8	163/64	23/8	5/16	250
46104	4	7/8	13/8	163/64	23/8	5/16	250

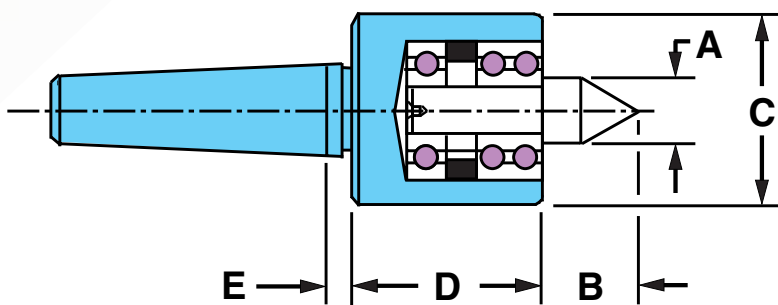
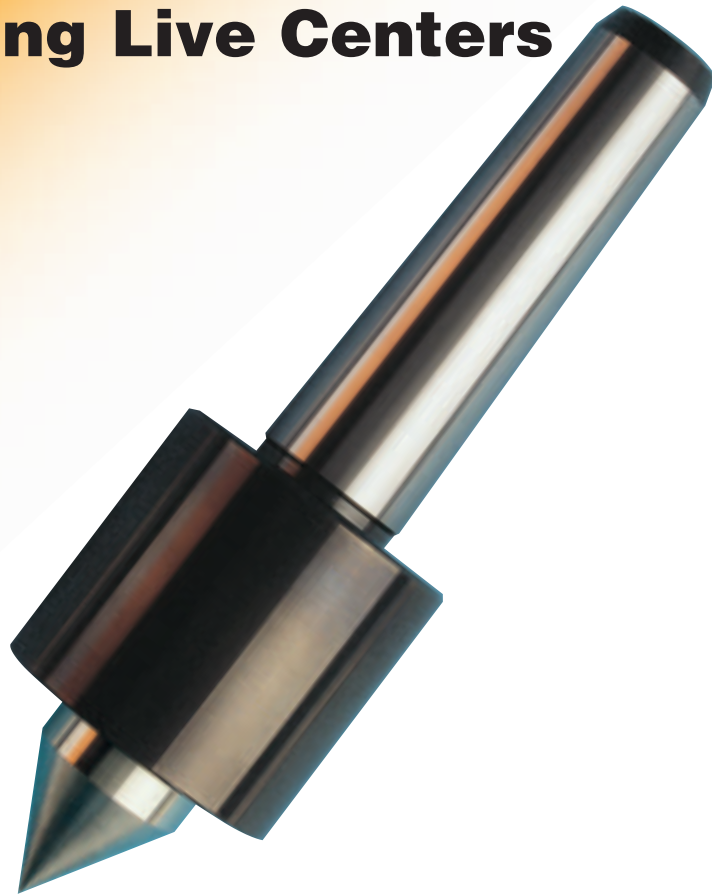


CENTER EXTRACTOR	
46993	3 MT
46994	4 MT



Econo-Tri-Bearing Live Centers Standard Point

- Accuracy guaranteed to $\pm .0002$.
- Three rows of bearings.
- Points are through-hardened to 61-63 Rc.
- Sealed bearings lubricated for life, protected against contaminants and coolant.
- **Non-repairable**, trade-in available.

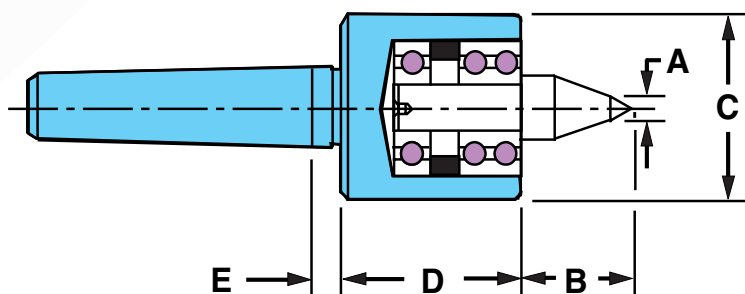


MORSE TAPER								
Model	Taper	A	B	C	D	E	Max. RPM	W.P. Weight
44102	2	9/16	13/16	15/8	15/8	1/4	2500	300
44103	3	13/16	1	2	115/16	1/4	2500	500
44104	4	1	1 1/4	2 3/8	2 1/4	1/4	2500	1100
44105	5	1	1 1/4	2 3/8	2 1/4	1/4	2500	1100



Econo-Tri-Bearing Live Centers Tracer Point

- Accuracy guaranteed to $\pm .0002$.
- Three rows of bearings.
- Points are through-hardened to 61-63 Rc.
- Sealed bearings lubricated for life, protected against contaminants and coolant.
- **Non-repairable**, trade-in available.

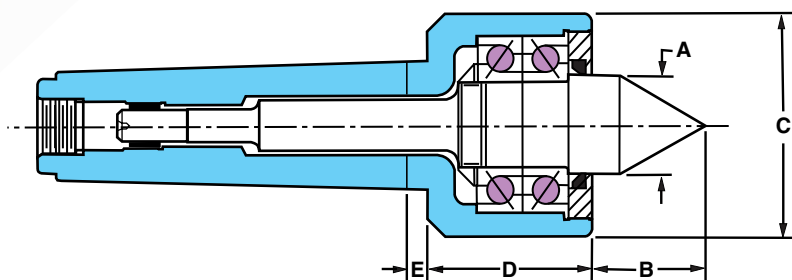


MORSE TAPER								
Model	Taper	A	B	C	D	E	Max. RPM	W. P. Weight
44902	2	3/8	1 1/4	15/8	15/8	1/4	2500	300
44903	3	3/8	1 1/2	2	1 15/16	1/4	2500	300
44904	4	1/2	2	2 3/8	2 1/4	1/4	2500	900
44905	5	1/2	2	2 3/8	2 1/4	1/4	2500	900



Regal Live Centers Standard Point

- Accuracy guaranteed to $\pm .0001$.
- Heavy-duty bearing design.
- Points are through-hardened to 61-63 Rc.
- Full-length spindle for extra rigidity.
- Double row of angular contact bearings for superior performance.
- Body heat-treated for additional strength.
- Riten full service and repair.



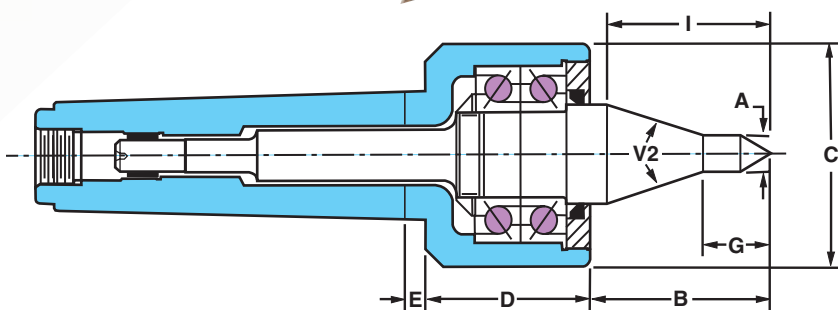
MORSE TAPER

Model	MT	A	B	C	D	E	Max. RPM	W. P. Weight
48602	2	1	1 1/4	23/8	13/4	1/4	4000	440
48603	3	1	1 1/4	23/8	13/4	1/4	4000	1100
48604	4	1 3/8	1 1/2	3	1 31/32	3/8	4000	2100
48605	5	1 3/8	1 13/16	3 1/16	2 3/32	9/32	5000	2800



Regal Live Centers Long Point

- Accuracy guaranteed to $\pm .0001$.
- Heavy-duty bearing design.
- Points are through-hardened to 61-63 Rc.
- Full-length spindle for extra rigidity.
- Double row of angular contact bearings for superior performance.
- Body heat-treated for additional strength.
- Point configuration allows for tool clearance.
- Riten full service and repair.

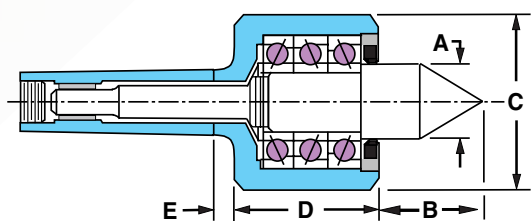


MORSE TAPER												
Model	MT	A	B	C	D	E	G	V2	I	Max. RPM	W. P.	Weight
48102	2	3/8	17/8	23/8	13/4	1/4	5/8	34	121/32	4000	310	
48103	3	3/8	17/8	23/8	13/4	1/4	5/8	34	121/32	4000	310	
48104	4	1/2	27/32	3	131/32	3/8	13/16	34	2	4000	1100	
48105	5	1/2	21/2	31/16	23/32	9/32	15/16	40	25/32	5000	1100	

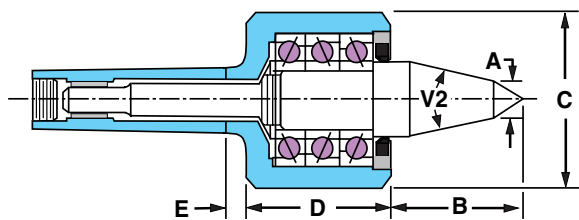


Advantage Live Centers Standard and Tracer Point

- Accuracy guaranteed to $\pm .0001$.
- Heavy-duty, tri-bearing design.
- Points are through-hardened to 61-63 Rc.
- Full-length spindle for extra rigidity.
- Less tailstock pressure required.
- Four bearing design for superior performance.
- Body heat-treated for additional strength.
- Riten full service and repair.



Standard Point



Tracer Point

MORSE TAPER

Model	MT	A	B	C	D	E	Max. RPM	W. P. Weight
51602	2	7/8	11/8	13/4	23/8	3/8	5000	880
51603	3	7/8	11/8	13/4	23/8	3/8	5000	920
51604	4	11/8	2	27/8	33/16	1/2	4200	2200
51605	5	11/8	2	27/8	33/16	1/2	4200	4400
51606	6	17/8	21/4	33/4	327/32	1/2	4000	6500

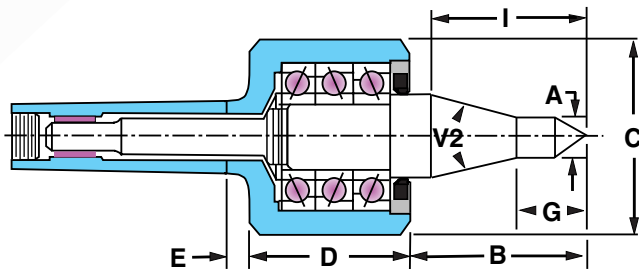
MORSE TAPER

Model	MT	A	B	C	D	E	V2	Max. RPM	W. P. Weight
51902	2	3/8	13/4	13/4	23/8	3/8	30°	5000	750
51903	3	3/8	13/4	13/4	23/8	3/8	30°	5000	750
51904	4	9/16	21/16	27/8	33/16	1/2	30°	4200	1700
51905	5	9/16	21/16	27/8	33/16	1/2	30°	4200	1700
51906	6	5/8	225/32	33/4	327/32	1/2	30°	4000	2200



Advantage Live Centers Long Point

- Accuracy guaranteed to $\pm .0001$.
- Heavy-duty, tri-bearing design.
- Points are through-hardened to 61-63 Rc.
- Full-length spindle for extra rigidity.
- Four bearing design for superior performance.
- Body heat-treated for additional strength.
- Point configuration allows for tool clearance.
- Riten full service and repair.



MORSE TAPER											
Model	MT	A	B	C	D	E	G	V2	I	Max. RPM	W. P. Weight
51102	2	3/8	2	13/4	23/8	3/8	3/4	30	111/16	5000	310
51103	3	3/8	2	13/4	23/8	3/8	3/4	30	111/16	5000	310
51104	4	1/2	2 1/2	27/8	33/16	1/2	15/16	30	23/32	4200	1100
51105	5	1/2	2 1/2	27/8	33/16	1/2	15/16	30	23/32	4200	1100

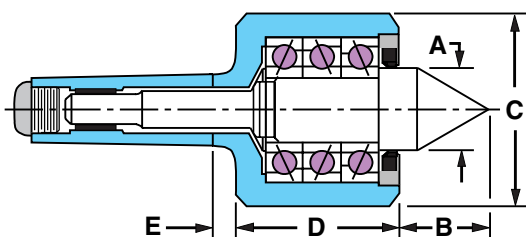


Heavy-Duty Live Centers

- Accuracy guaranteed to $\pm .0001$.
- Four-bearing design for heavier loads.
- Riten full service and repair.
- For use where the piece part may weigh several hundred pounds. Radial pressure and thrust requirements demand centers with bearing structures that will handle these loads.



*Jarno,
Brown & Sharpe,
and Straight Shanks
Available*



MORSE TAPER								
Model	MT	A	B	C	D	E	Max RPM	W. P. Weight
34163	3	7/8	11/8	13/4	23/8	3/8	5000	920
34164	4	11/8	2	27/8	33/16	1/2	4200	2200
34105	5	17/8	2 1/4	33/4	327/32	1/2	3200	8000
34106	6	2	2 1/4	45/8	327/32	1/2	3000	14000
34107	7	2	2 1/4	45/8	327/32	1/2	3000	14000
JARNO TAPER								
34220	20	2	2 1/4	45/8	327/32	1/2	3000	14000

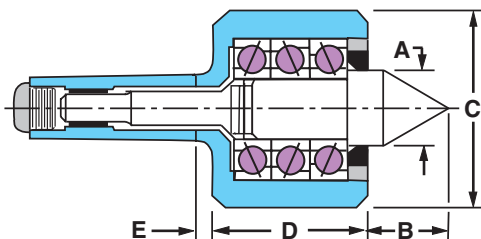


EXTRA HEAVY-DUTY Live Centers

- Accuracy guaranteed to $\pm .0002$.
- Designed for heavy steel rolls, paper rolls, printing rolls, castings, forgings and other large parts.
- Riten full service and repair.
- For use where the piece part may weigh several thousand pounds. Radial pressure and thrust requirements demand centers with bearing structures that will handle these loads.



Jarno,
Brown & Sharpe,
and Straight Shanks
Available



MORSE TAPER								
Model	MT	A	B	C	D	E	Max RPM	W. P. Weight
55103*	3	1 1/8	1 1/2	2 13/16	3 3/16	1/2	4000	3000
55164*	4	1 21/32	1 3/4	3 3/4	3 27/32	1/2	4000	4800
55105	5	2	2 1/4	4 5/8	3 27/32	1/2	3000	12000
55106	6	2 5/8	2 1/2	6 9/16	5 3/32	19/32	3000	22500
55107	7	2 5/8	2 1/2	6 9/16	5 3/32	3/4	3000	22500

*Stub spindle design on 3MT and 4MT

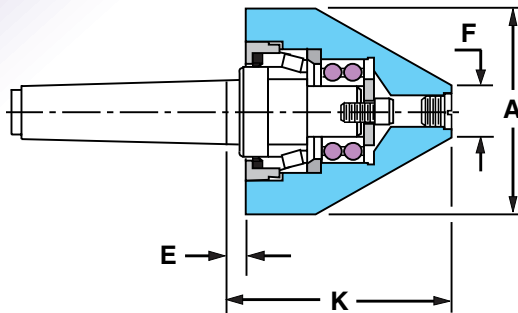


Heavy-Duty Bull Nose Live Centers

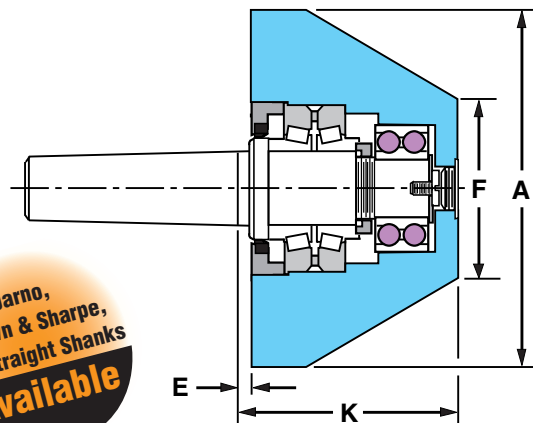
- Large workpiece center holes.
- Large piece parts.
- Riten full service and repair.

Riten Bull Nose Centers are constructed with larger bearings to carry heavier loads. The strength and alignment of the fully supported bull nose gives longer center life when machining larger workpieces. The rigidity of the center prevents vibration and chatter.

For best results, choose a bull nose center that will place the workpiece in the middle or toward the larger end of the 60° angle. This will balance the weight of the part on the center and help carry the load evenly over the bearings.



Accuracy guaranteed to $\pm .00015$



Accuracy guaranteed to $\pm .0002$

Jarno,
Brown & Sharpe,
and Straight Shanks
Available

MORSE TAPER

Model	MT	A	F	E	K	W. P. Weight
56412	2	4	1	3/8	4 9/32	2000
56413	3	4	1	3/8	4 9/32	3800
56414	4	4	1	3/8	4 9/32	4800
56415	5	4	1	3/8	4 9/32	4800
56523	3	5	2	3/8	3 13/16	3800
56524	4	5	2	3/8	3 13/16	4800
56525	5	5	2	3/8	3 13/16	4800
56633	3	6 1/2	3	3/8	3 29/32	3800
56634	4	6 1/2	3	3/8	3 29/32	4800
56635	5	6 1/2	3	3/8	3 29/32	4800
56636	6	6 1/2	3	25/32	4 5/16	4800

MORSE TAPER

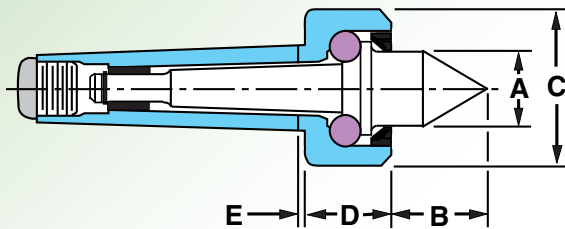
Model	MT	A	F	E	K	W. P. Weight
56945	5	9	4	15/32	6 5/8	7000
56946	6	9	4	15/32	6 5/8	12000
56105	5	10 1/2	5	7/16	7 7/16	7000
56106	6	10 1/2	5	7/16	7 7/16	15000
56107	7	10 1/2	5	7/16	7 7/16	15000
56126	6	12	6	7/16	7 7/16	15000
56127	7	12	6	7/16	7 7/16	15000



Super Accurate Live Centers

- Accuracy guaranteed to $\pm .00005$.
- Compact design.
- Extended points available.
- Ideal for grinding.
- Five pounds of thrust to seat bearings.
- Riten full service and repair.

The ultimate live center for grinding is provided by Riten's unique design. Ideal for precision grinding applications; $\pm .00005$.



**Carbide
Tipped Points
Available**

MORSE TAPER

Model	MT	A	B	C	D	E	RPM	W. P. Weight
12102	2	3/4	13/16	11/4	3/4	3/32	1000	400
12103	3	7/8	11/16	111/16	15/16	3/16	1000	1000
12104	4	1	1	21/8	13/16	1/4	1000	1800
12105	5	1 1/2	1 1/2	213/16	113/32	1/4	1000	3800
12106	6	2 1/8	2 1/8	43/16	2 1/2	5/16	1000	6000

BROWN & SHARPE TAPER

Model	BS T	A	B	C	D	E	RPM	W. P. Weight
12407	7	3/4	13/16	11/4	3/4	3/32	1000	400
12409	9	7/8	1	111/16	15/16	3/16	1000	1000
12410	10	1	1	21/8	13/16	9/16	1000	1800
12411	11	1	1	21/8	13/16	1/4	1000	1800
12412	12	1 1/2	1 1/2	213/16	113/32	5/16	1000	3800
12413	13	1 1/2	1 1/2	213/16	113/32	1/4	1000	3800

JARNO TAPER

Model	JT	A	B	C	D	E	RPM	W. P. Weight
12206	6	3/4	13/16	11/4	3/4	3/32	1000	300
12207	7	7/8	1	111/16	15/16	3/16	1000	800
12209	9	7/8	1	111/16	15/16	3/16	1000	1000
12210	10	1	1	21/8	13/16	3/16	1000	1800
12212	12	1	1	21/8	13/16	1/4	1000	1800
12214	14	1 1/2	1 1/2	213/16	113/32	1/4	1000	3800
12216	16	1 1/2	1 1/2	213/16	113/32	3/16	1000	3800
12220	20	2 1/8	2 1/8	43/16	2 1/2	5/16	1000	6000

STRAIGHT SHANK

Model	SS	A	B	C	D	E*	RPM	W. P. Weight
12301	1/2	1/2	9/16	11/4	3/4	21/4	1000	100
12302	3/4	1/2	9/16	11/4	3/4	23/4	1000	440
12303	1	7/8	1	111/16	15/16	35/8	1000	1000
12304	1	7/8	1	111/16	15/16	5	1000	1000
12305	1 1/4	1	1	21/8	13/16	5	1000	1800
12306	1 1/2	1	1	21/8	13/16	5	1000	1800
12307	1 3/4	1	1	21/8	13/16	7	1000	1800
12309	2	1 1/2	1 1/2	213/16	113/32	6	1000	3800

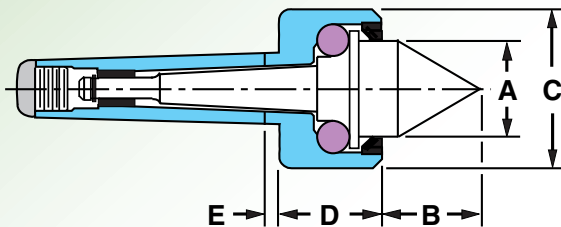
* Straight shanks only – E dimension equals entire length of shank.



Medium-Duty Super Accurate

- Accuracy guaranteed to $\pm .0001$.
- Medium-duty for heavier cuts.
- Bigger bearings for heavier loads.
- Five pounds of thrust to seat bearings.
- Riten full service and repair.
- Extended points available.

Medium-duty live centers are required where the weight of the workpiece is several hundred pounds. These centers are built with larger bearings to provide the support and strength required to handle heavier workpieces.



**Carbide
Tipped Points
Available**

MORSE TAPER

Model	MT	A	B	C	D	E	RPM	W. P. Weight
34102	2	7/8	1	111/16	11/16	3/32	1000	500
34103	3	1	1	21/8	13/8	3/16	1000	1200
34104	4	1 1/2	1 1/2	213/16	121/32	3/16	1000	2200

JARNO TAPER

Model	JT	A	B	C	D	E	RPM	W. P. Weight
34206	6	7/8	1	111/16	11/16	3/32	1000	400
34207	7	1	1	21/8	13/8	3/16	1000	900
34209	9	1	1	21/8	13/8	3/16	1000	1300
34210	10	1 1/2	1 1/2	213/16	121/32	5/16	1000	2200
34211	11	1 1/2	1 1/2	213/16	121/32	3/16	1000	2200
34212	12	1 1/2	1 1/2	213/16	121/32	1/4	1000	2200
34214	14	2 1/8	2 1/8	43/16	21/2	1/2	1000	4400
34216	16	2 1/8	2 1/8	43/16	21/2	5/16	1000	4400

BROWN & SHARPE TAPER

Model	BS						RPM	W. P. Weight
	T	A	B	C	D	E		
34407	7	7/8	1	111/16	11/16	3/32	1000	500
34409	9	1	1	21/8	13/8	3/16	1000	1300
34410	10	1 1/2	1 1/2	213/16	121/32	3/16	1000	2200
34411	11	1 1/2	1 1/2	213/16	121/32	1/4	1000	2200
34412	12	2 1/8	2 1/8	43/16	21/2	5/16	1000	4400
34413	13	2 1/8	2 1/8	43/16	21/2	5/16	1000	4400

STRAIGHT SHANK

Model	SS	A	B	C	D	E*	RPM	W. P. Weight
34303	1	1	1	21/8	13/8	35/8	1000	1300
34304	1	1	1	21/8	13/8	5	1000	1300
34305	1 1/4	1 1/2	1 1/2	213/16	121/32	5	1000	2200
34306	1 1/2	1 1/2	1 1/2	213/16	121/32	5	1000	2200
34307	1 3/4	1 1/2	1 1/2	213/16	121/32	7	1000	2200
34309	2	2 1/8	2 1/8	43/16	21/2	6	1000	4400

* Straight shanks only – E dimension equals entire length of shank.



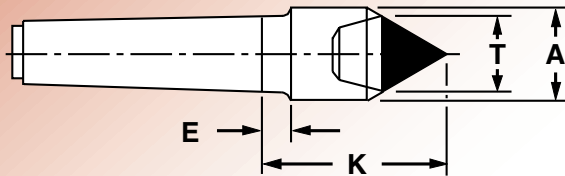
Large Carbide Point Imperial Dead Centers Increased Centerhole Range

- Accuracy guaranteed to $\pm .0001$.
- Covers the widest range of center hole sizes.
- Eliminates the need for special centers.
- Also available in other tapers.

Imperial Carbide Centers cover the requirements for a wide range of work-piece center holes. They reduce costs by eliminating the need for special dead centers.

Knockout ends are hardened on carbide tipped dead centers.

Applying a Moly EP632 grease on the point will reduce friction and wear.



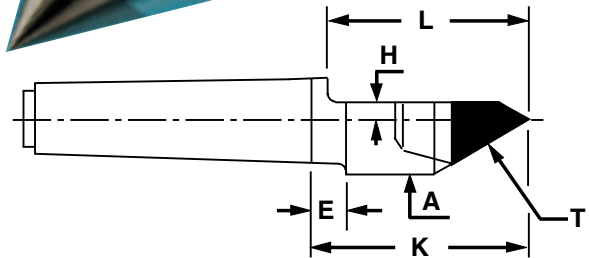
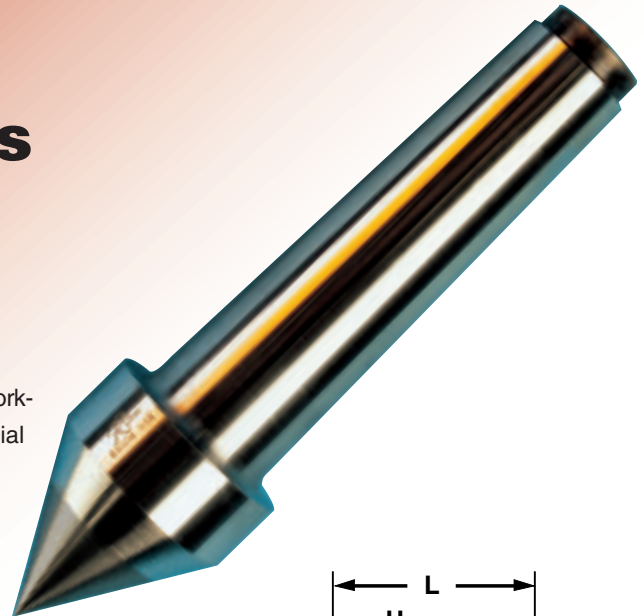
Full Dead Centers

MORSE TAPER					
Model	Taper	T*	A	K	E
69102	2	1	1 1/4	23/8	3/8
69103	3	1	1 1/4	23/8	3/8
69104	4	1 1/4	13/4	2 11/16	1/2
69105	5	1 1/4	13/4	3 5/16	—

JARNO TAPER					
Model	Taper	T*	A	K	E
69206	6	1	1 1/4	23/8	3/8
69209	9	1 1/4	13/4	2 11/16	1/2
69210	10	1 1/4	13/4	2 11/16	1/2
69214	14	1 1/4	13/4	3 1/2	—

BROWN & SHARPE TAPER					
Model	Taper	T*	A	K	E
69407	7	1	1 1/4	23/8	3/8
69409	9	1 1/4	13/4	2 11/16	1/2
69412	12	1 1/4	1 51/64	4	—

* Carbide Diameter



Half Dead Centers

MORSE TAPER							
Model	Taper	T*	A	H	L	K	E
69502	2	1	1 1/4	1/8	1 11/16	23/8	3/8
69503	3	1	1 1/4	1/8	1 11/16	23/8	3/8
69504	4	1 1/4	13/4	1/4	2 1/4	2 15/16	1/2
69505	5	1 1/4	13/4	1/4	2 3/4	3 5/16	-

JARNO TAPER							
Model	Taper	T*	A	H	L	K	E
69606	6	1	1 1/4	1/8	1 7/8	23/8	3/8
69609	9	1 1/4	13/4	1/4	1 7/8	2 15/16	1/2
69610	10	1 1/4	13/4	1/4	2	2 15/16	1/2
69614	14	1 1/4	13/4	1/4	3	3 1/2	-

BROWN & SHARPE TAPER							
Model	Taper	T*	A	H	L	K	E
69707	7	1	1 1/4	1/8	1 7/8	23/8	3/8
69709	9	1 1/4	13/4	1/4	2	2 15/16	1/2
69712	12	1 1/4	1 51/64	1/4	3 1/4	4	-

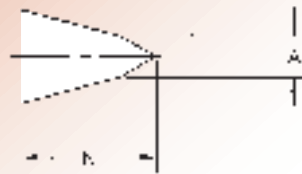
* Carbide Diameter



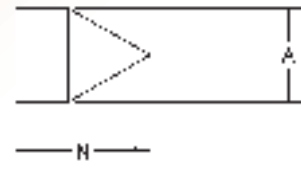
Mill Taper Dead Centers

- Accurate to $\pm .0001$.
- Manufactured specifically for Cincinnati machines.
- Through-hardened to 61-63 Rc.
- Carbide tipped available.

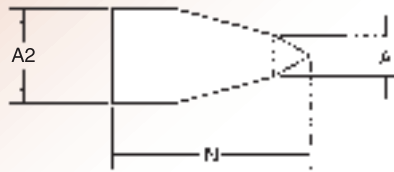
Nose Styles



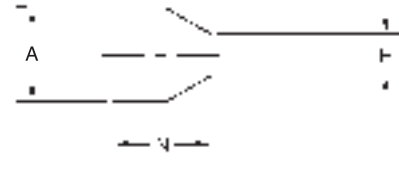
Style 4



Style 5

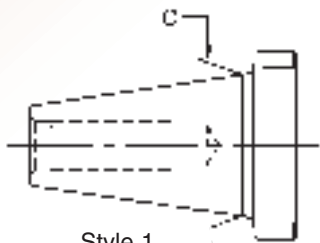


Style 6

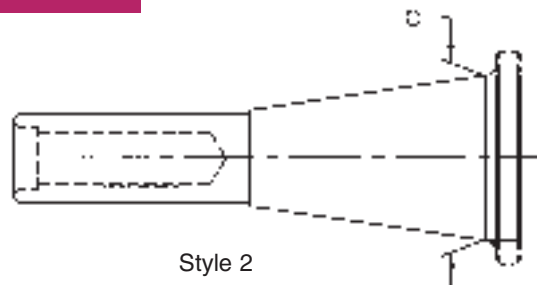


Style 7

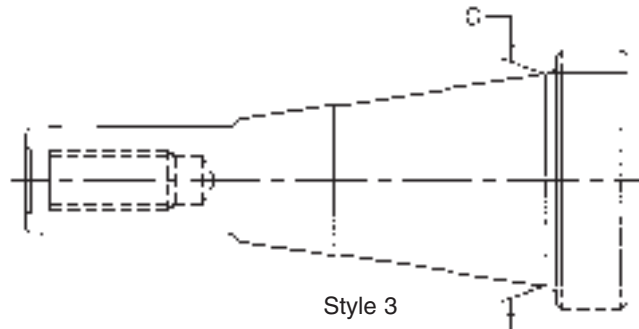
Shank Styles



Style 1



Style 2



Style 3

MILL TAPER DEAD CENTERS - 35 TAPER										
Taper Size	Thread	Shank Style	Nose Style	A2=Large Nose Dia.	A=Nose Dia.	C=Gage Line	F=Blunt Dia.	N=Nose Length	Cin. Part #	Riten Part #
35	1/2-13	1	4	—	0.250	1.500	—	1.625	3646478	61201
35	1/2-13	1	4	—	0.375	1.500	—	1.625	3646346	61202
35	1/2-13	1	4	—	0.500	1.500	—	1.625	3646345	61203
35	1/2-13	1	4	—	1.000	1.500	—	1.625	3646479	61204
35	1/2-13	1	4	—	0.562	1.500	—	2.000	3646345L	61205
35	1/2-13	1	4	—	0.250	1.500	—	2.375		61206
35	1/2-13	1	4	—	0.250	1.500	—	2.750		61207
35	1/2-13	1	5	—	0.812	1.500	—	2.250		61208
35	1/2-13	1	5	—	1.500	1.500	—	2.625		61209
35	1/2-13	1	7	—	2.000	1.500	.700	1.625	3646480	61210
35	1/2-13	1	7	—	2.500	1.500	1.438	1.625	3646481	61211
35	1/2-13	1	7	—	3.125	1.500	2.156	1.625	3646482	61212

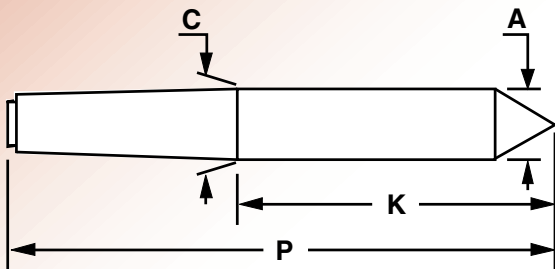
MILL TAPER DEAD CENTERS - 40 TAPER										
Taper Size	Thread	Shank Style	Nose Style	A2=Large Nose Dia.	A=Nose Dia.	C=Gage Line	F=Blunt Dia.	N=Nose Length	Cin. Part #	Riten Part #
40	5/8-11	1	4	—	0.250	1.750	—	2.250	3646483	61301
40	5/8-11	1	4	—	0.375	1.750	—	2.250	3646489	61302
40	5/8-11	1	4	—	0.500	1.750	—	2.250	3646484	61303
40	5/8-11	1	4	—	0.250	1.750	—	2.820	3646483L	61304
40	5/8-11	1	4	—	0.500	1.750	—	2.820	3646484L	61305
40	5/8-11	1	5	—	2.250	1.750	—	3.000		61306
40	5/8-11	1	6	1.750	1.000	1.750	—	2.250	3646485	61307
40	5/8-11	1	6	1.750	1.000	1.750	—	2.820	3646485L	61308
40	5/8-11	1	6	1.500	0.500	1.750	—	2.945	4238238	61309
40	5/8-11	1	6	1.500	0.250	1.750	—	3.500		61310
40	5/8-11	1	7	—	2.750	1.750	1.375	1.816	3646487	61311
40	5/8-11	1	7	—	3.250	1.750	2.000	1.833	3646488	61312
40	5/8-11	1	7	—	2.250	1.750	0.625	1.959	3646486	61313
40	5/8-11	2	6	1.250	0.250	1.750	—	2.344	622124	61314
40	5/8-11	2	6	1.250	0.500	1.750	—	2.344	622105	61315
40	5/8-11	2	6	1.250	0.750	1.750	—	2.344	622106	61316
40	5/8-11	2	7	—	2.250	1.750	1.125	1.287	622108	61317
40	5/8-11	2	7	—	2.250	1.750	0.500	1.833	622107	61318
40	5/8-11	2	7	—	3.125	1.750	1.875	2.178	622109	61319

MILL TAPER DEAD CENTERS - 45 TAPER										
Taper Size	Thread	Shank Style	Nose Style	A2=Large Nose Dia.	A=Nose Dia.	C=Gage Line	F=Blunt Dia.	N=Nose Length	Cin. Part #	Riten Part #
45	5/8-11	3	4	—	0.625	2.250	—	2.124	3624473	61401
45	5/8-11	3	4	—	0.500	2.250	—	2.500	3673534	61402
45	5/8-11	3	4	—	0.750	2.250	—	2.500	3624727	61403
45	5/8-11	3	4	—	1.000	2.250	—	2.500	3673535	61404
45	5/8-11	3	4	—	1.250	2.250	—	3.000	3624727L	61405
45	5/8-11	3	4	—	1.000	2.250	—	3.561	3674245	61406
45	5/8-11	3	5	—	1.375	2.250	—	1.500	3624725	61407
45	5/8-11	3	6	1.375	0.500	2.250	—	3.500	3674244	61408
45	5/8-11	3	7	—	2.000	2.250	0.700	1.875	3673538	61409
45	5/8-11	3	7	—	3.125	2.250	2.156	1.589	3673539	61410
45	5/8-11	3	7	—	3.375	2.250	1.000	2.619	3624474	61411
45	5/8-11	3	7	—	4.000	2.250	1.125	3.125		61412
45	5/8-11	3	7	—	6.000	2.250	2.500	3.750		61413



Long Series Full Dead Centers

- Accuracy guaranteed to $\pm .0001$.
- Through-hardened to 61-63 Rc.
- Riten full service and repair.
- Applying a Moly EP632 grease on the point will reduce friction and wear.



MORSE TAPER				
Model	Taper	P	K	C/A
64502	2	53/16	25/8	.700
64602	2	63/4	43/16	.700
64503	3	61/4	31/16	.938
64603	3	63/4	39/16	.938
64504	4	73/4	311/16	1.231
64604	4	81/4	43/16	1.231
64505	5	91/2	45/16	1.748
64605	5	10	413/16	1.748
64506	6	121/2	51/4	2.494
64606	6	13	53/4	2.494

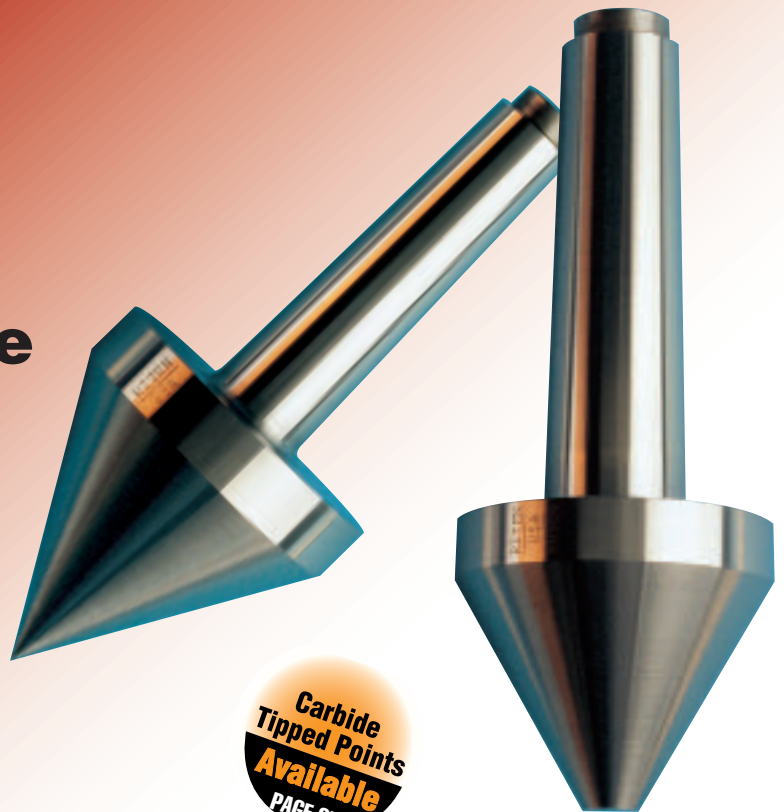
JARNO TAPER				
Model	Taper	P	K	C/A
64510	10	81/2	31/2	1.250
64610	10	91/4	41/4	1.250
64514	14	111/2	41/2	1.750
64614	14	12	5	1.750

BROWN & SHARPE				
Model	Taper	P	K	C/A
64407	7	51/4	23/8	.720
64412	12	121/4	51/8	1.797

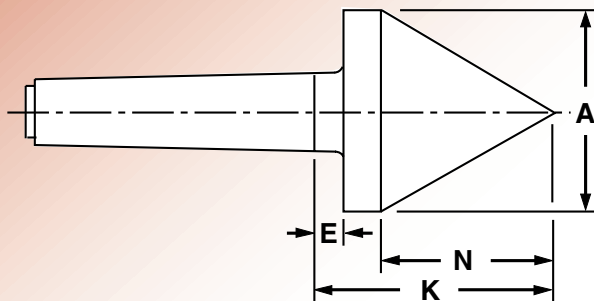


Pipe and Bull Nose Dead Centers

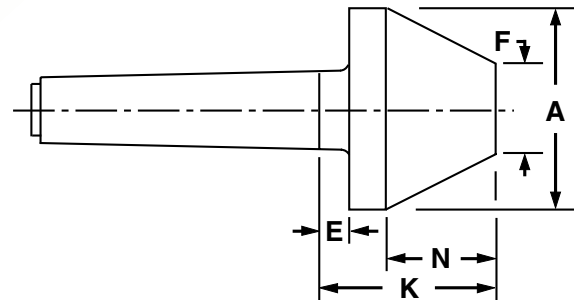
- Accuracy guaranteed to $\pm .0001$.
- Through-hardened to 61-63 Rc.
- Riten full service and repair.
- Special "F" dimension available on bull nose.
- Quick delivery available on these items.



Carbide
Tipped Points
Available
PAGE 35



Pipe Nose Dead Center



Bull Nose Dead Center

Special F dimensions available. Quick delivery on these items.

MORSE TAPERS					
Model	Taper	A	N	E	K
66102	2	21/8	1.84	1/2	2.84
66103	3	23/4	2.381	1/2	3.38
66104	4	23/4	2.381	1/2	3.38
66105	5	31/2	3.031	1/2	4.03

JARNO TAPERS					
Model	Taper	A	N	E	K
66214	14	31/2	3.031	1/2	4.03

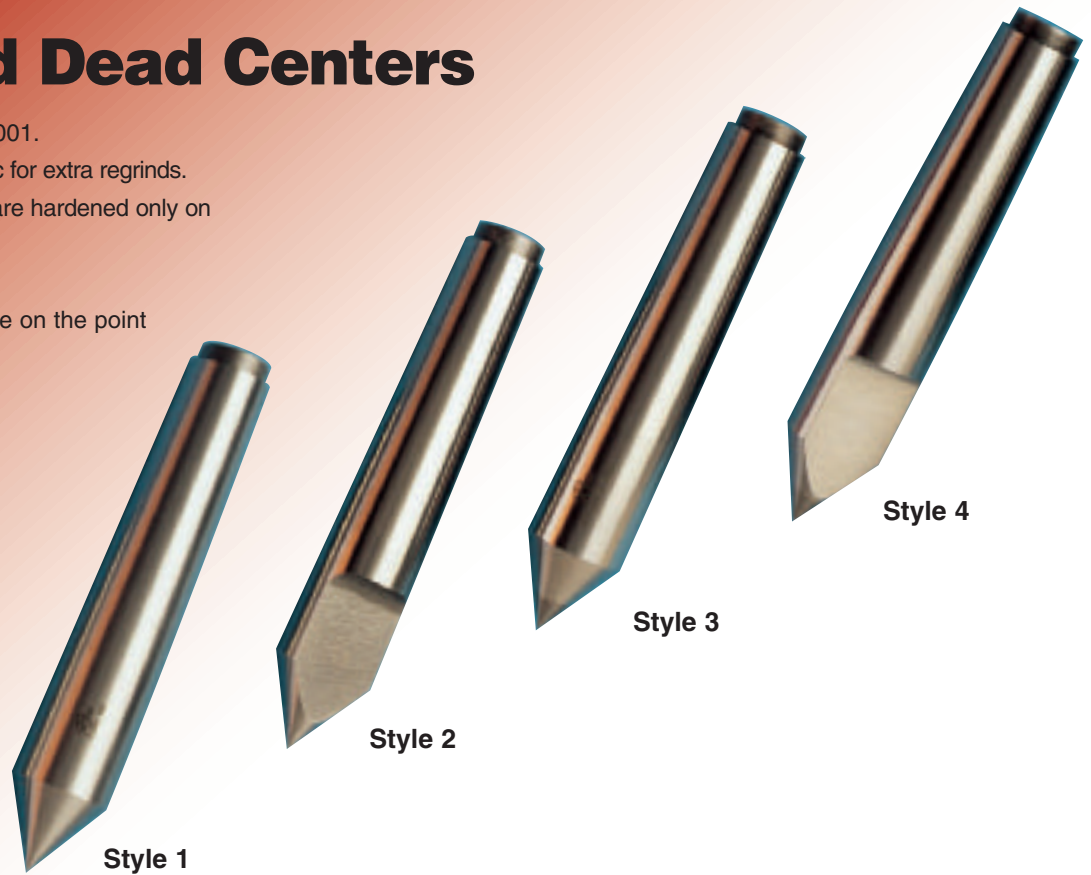
MORSE TAPERS						
Model	Taper	A	F	N	E	K
66502	2	21/8	1/2	1.407	1/2	213/32
66602	2	21/8	1	.974	1/2	131/32
66503	3	23/4	1/2	1.948	1/2	261/64
66603	3	23/4	1	1.515	1/2	233/64
66703	3	23/4	11/2	1.082	1/2	25/64
66504	4	23/4	1/2	1.948	1/2	215/16
66604	4	23/4	1	1.515	1/2	233/64
66704	4	23/4	11/2	1.082	1/2	25/64
66505	5	31/2	1	2.165	1/2	311/64
66605	5	31/2	2	1.299	1/2	219/64

JARNO TAPERS						
Model	Taper	A	F	N	E	K
66514	14	31/2	1	2.165	1/2	311/64
66614	14	31/2	2	1.299	1/2	219/64

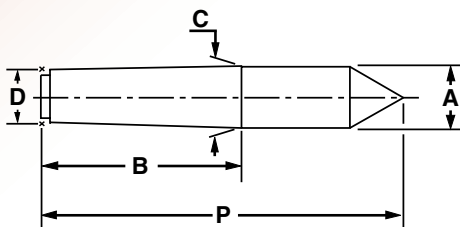


High Speed Dead Centers

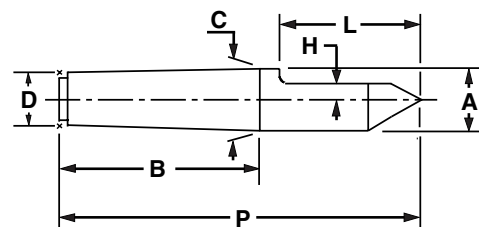
- Accuracy guaranteed to $\pm .0001$.
- Through-hardened to 61-63 Rc for extra regrinds.
- Carbide tipped dead centers are hardened only on the knockout ends.
- Riten full service and repair.
- Applying a Moly EP632 grease on the point will reduce friction and wear.



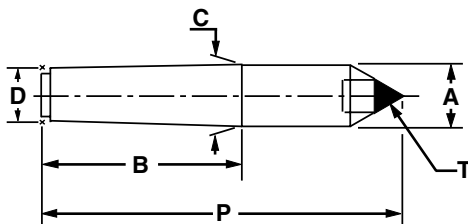
STYLE 1 - STEEL FULL CENTER



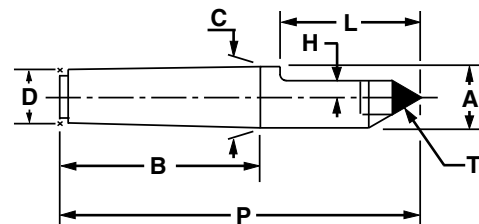
STYLE 2 - STEEL HALF CENTER



STYLE 3 - CARBIDE TIPPED FULL CENTER



STYLE 4 - CARBIDE TIPPED HALF CENTER





When ordering specify model # and style #,
for example: 7104-Style 3.

MORSE TAPER

Model	Taper	P	B	C/A	D	•T	H	L
7101	1	35/16	21/8	.475	.369	1/4	1/8	1
7102	2	43/16	29/16	.700	.572	3/8	3/16	13/8
7103	3	51/4	33/16	.938	.778	1/2	1/4	111/16
7104	4	63/4	41/16	1.231	1.020	1/2	1/4	21/4
7105	5	81/2	53/16	1.748	1.475	5/8	3/8	23/4
7106	6	111/2	71/4	2.494	2.116	7/8	1/2	31/2
7107	7	15	10	3.270	2.750	1	3/4	4

JARNO TAPER

Model	Taper	P	B	C/A	D	•T	H	L
7204	6	41/2	3	.750	.600	3/8	3/16	11/8
7205	6	51/2	3	.750	.600	3/8	3/16	23/16
7206	6	6	3	.750	.600	3/8	3/16	21/2
7207	7	51/4	31/2	.875	.700	3/8	3/16	13/16
7208	8	6	4	1.000	.800	1/2	1/4	15/8
7209	9	63/4	41/2	1.125	.900	1/2	1/4	17/8
7210	10	71/2	5	1.250	1.000	1/2	1/4	2
7211	11	81/4	51/2	1.375	1.100	1/2	1/4	2
7212	12	9	6	1.500	1.200	5/8	5/16	21/4
7213	13	93/4	61/2	1.625	1.300	5/8	5/16	21/2
7214	14	101/2	7	1.750	1.400	5/8	5/16	3
7215	15	111/4	71/2	1.875	1.500	5/8	5/16	3
7216	16	12	8	2.000	1.600	3/4	3/8	3
7218	18	131/2	9	2.250	1.800	7/8	7/16	31/2
7220	20	15	10	2.500	2.000	1	1/2	4
7236	36	27	18	4.500	3.600	13/4	7/8	7

BROWN & SHARPE TAPER

Model	Taper	P	B	C/A	D	•T	H	L
7405	5	31/8	2	.533	.450	1/4	1/8	15/16
7406	6	35/8	23/8	.599	.500	1/4	1/8	15/16
7407	7	43/8	27/8	.720	.600	3/8	3/16	11/8
7408	8	57/16	39/16	.898	.750	1/2	1/4	13/8
7409	9	61/2	41/4	1.078	.901	1/2	1/4	2
7410	10	77/8	5	1.260	1.045	1/2	1/4	21/4
7400	★10	89/16	511/16	1.289	1.045	1/2	1/4	21/4
7411	11	95/16	515/16	1.498	1.250	5/8	5/16	21/2
7401	★11	101/8	63/4	1.531	1.250	5/8	5/16	21/2
7412	12	111/8	71/8	1.797	1.500	5/8	3/8	31/4
7413	13	113/4	73/4	2.073	1.750	7/8	7/16	31/2
7415	15	131/2	83/4	2.615	2.250	1	1/2	4
7417	17	141/2	93/4	3.156	2.750	11/2	3/4	4
7418	18	15	101/4	3.427	3.000	11/2	3/4	41/2

• Carbide diameter ★ CINN. Grinder

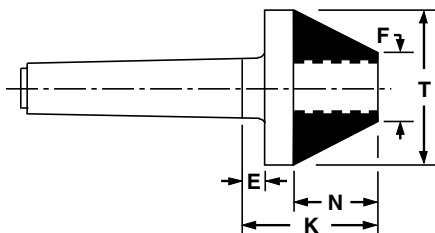
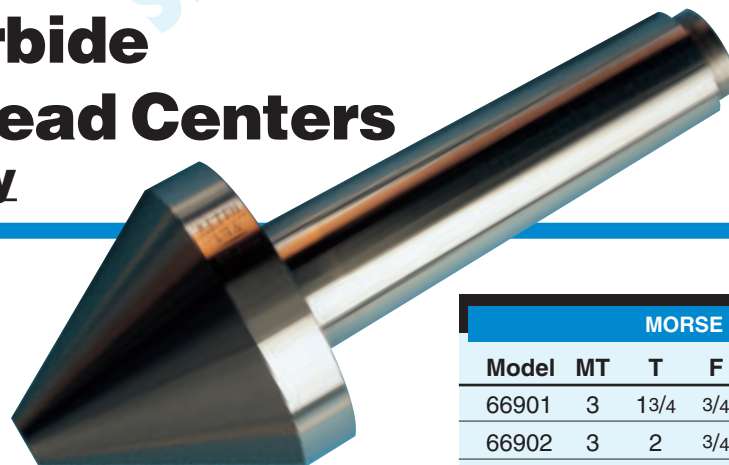


Fast-Trak Specials

Order a Riten Fast-Trak Special when you need a special center and time is of the essence. The same Riten quality in two weeks or less at no additional charge. Additional tapers and carbide tips are available from our semi-finished inventories. Call Riten at **800-338-0027** with your special requirements. If you would rather fax your requirements, see pages 37 and 38.

- Two-week delivery
- Accuracy guaranteed to $\pm .0001$.
- Other tapers available.
- Both steel and carbide centers.
- Hardened knockout ends.
- Riten full service and repair.

Special Carbide Bull Nose Dead Centers 2-week delivery



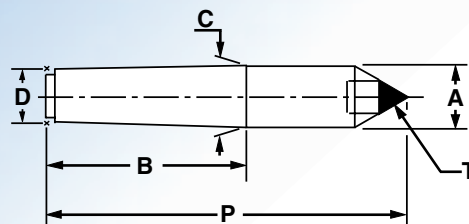
MORSE TAPER						
Model	MT	T	F	N	E	K
66901	3	13/4	3/4	0.87	1/2	1.86
66902	3	2	3/4	1.08	1/2	2.08
66903	3	2 1/2	1	1.30	1/2	2.30
66904	3	2 3/4	1	1.52	1/2	2.51
66905	4	13/4	3/4	0.87	1/2	1.86
66906	4	2	3/4	1.08	1/2	2.08
66907	4	2 1/2	1	1.30	1/2	2.30
66908	4	2 3/4	1	1.52	1/2	2.51
66909	5	13/4	3/4	0.87	1/2	2.64
66910	5	2	3/4	1.08	1/2	2.08
66911	5	2 1/2	1	1.30	1/2	2.30
66912	5	2 3/4	1	1.52	1/2	2.51



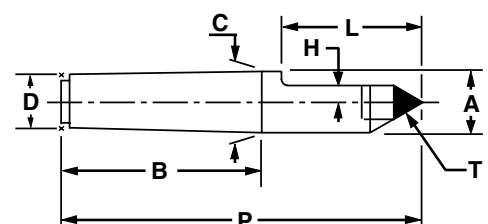
Fast-Trak Special Carbide Dead Centers

2-week delivery

STYLE 3 - CARBIDE TIPPED FULL CENTER



STYLE 4 - CARBIDE TIPPED HALF CENTER



When ordering specify model # and style #, for example: 7905-Style 3.

MORSE TAPER

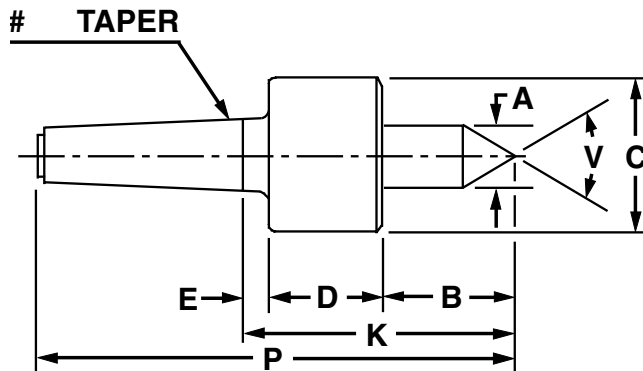
Model	Taper	P	B	C/A	D	•T	H	L
7905	3MT	5 1/4	33/16	0.938	0.778	3/4	1/8	1 11/16
7906	3MT	6 1/4	33/16	0.938	0.778	3/4	1/8	2 5/8
7907	3MT	6 3/4	33/16	0.938	0.778	3/4	1/8	3 1/8
7908	4MT	6 3/4	41/16	1.231	1.020	3/4	1/8	2 1/4
7909	4MT	6 3/4	41/16	1.231	1.020	1	1/8	2 1/4
7910	4MT	7 3/4	41/16	1.231	1.020	3/4	1/8	2 3/4
7911	4MT	7 3/4	41/16	1.231	1.020	1	1/8	2 3/4
7912	4MT	8 1/4	41/16	1.231	1.020	3/4	1/8	3 1/4
7913	4MT	8 1/4	41/16	1.231	1.020	1	1/8	3 1/4
7914	5MT	8 1/2	53/16	1.748	1.475	1	1/8	2 3/4
7915	5MT	9 1/2	53/16	1.748	1.475	1	1/8	3 3/4
7916	5MT	10	53/16	1.748	1.475	1	1/8	4 1/4

JARNO TAPER

Model	Taper	P	B	C/A	D	•T	H	L
7926	10J	7 1/2	5	1.25	1.000	1	1/8	2
7927	10J	8 1/2	5	1.25	1.000	1	1/8	3
7928	10J	9 1/4	5	1.25	1.000	1	1/8	3 3/4
7929	14J	10 1/2	7	1.75	1.400	1	1/8	3
7930	14J	11 1/2	7	1.75	1.400	1	1/8	4
7931	14J	12	7	1.75	1.400	1	1/8	4 1/2

• Carbide diameter

**To order, fill in the dimensions you require and FAX or mail us a copy.
Any dimension not supplied will be Riten factory standard.**



LIVE CENTER KEY

A - Point Diameter
B - Point Length
C - Head Diameter
D - Head Length
E - Gage Line to Back of Head
F - Minimum Diameter (Bull Nose and Female)
G - Point to Angle (Sprint)
K - Gage Line to Point
P - Overall Length
V - Point Angle

_____ TAPER A _____ B _____ C _____

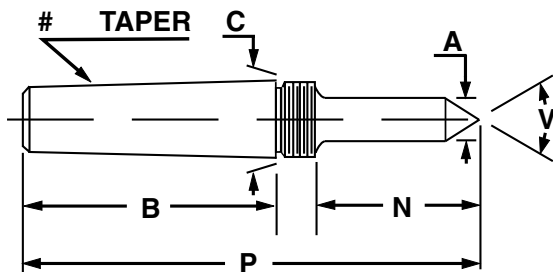
E _____ F _____ G _____ V _____

RPM _____ Workpiece Weight _____ Thrust _____

DEAD CENTER KEY

A - Point Diameter
B - Taper Length
C - Gage Line Diameter
E - Gage Line to Back of Head
F - Minimum Diameter (Bull Nose and Female)
G - Female Major Diameter
H - Height Above Center Line
J - Flat Length
K - Gage Line to Point
L - Length of Cut Out
N - Point Length
P - Overall Length
T - Carbide Tip Diameter
V - Point Angle
V2 - Secondary Angle
W - Flange Outside Diameter

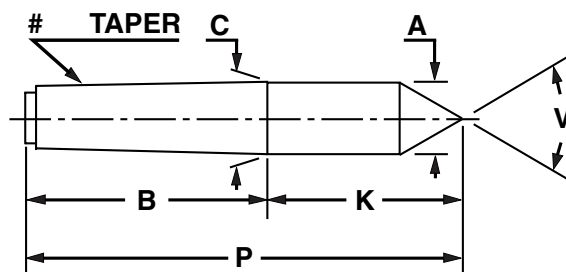
CNC TAILSTOCK DEAD CENTER



_____ TAPER A _____ B _____ C _____

N _____ P _____ V _____ T _____

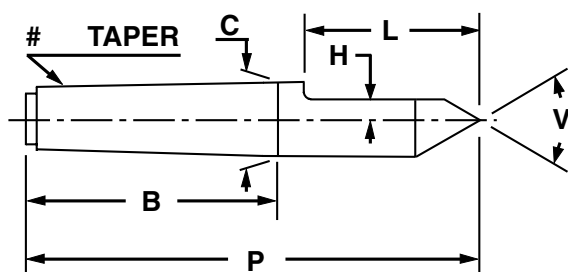
FULL DEAD CENTER



_____ TAPER A _____ B _____ C _____

K _____ P _____ V _____ T _____

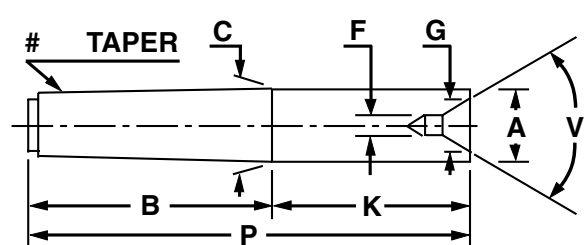
HALF DEAD CENTER



_____ TAPER B _____ C _____ H _____

L _____ P _____ V _____ T _____

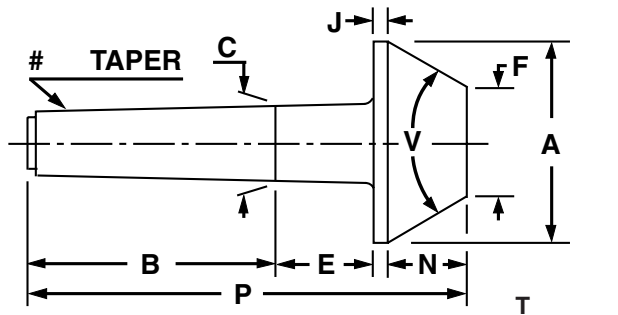
FEMALE DEAD CENTER



_____ TAPER A _____ B _____ C _____

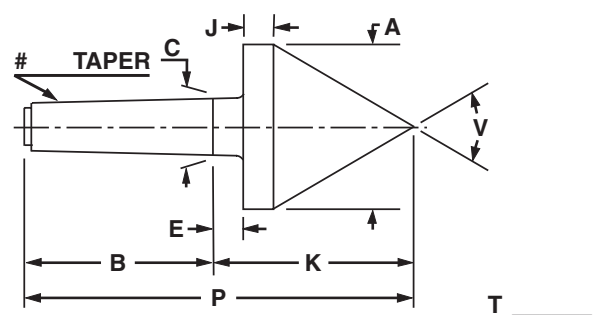
F _____ G _____ K _____ P _____ V _____

BULL NOSE DEAD CENTER



_____ TAPER _____ A _____ B _____ C _____
E _____ F _____ J _____ N _____ P _____ V _____

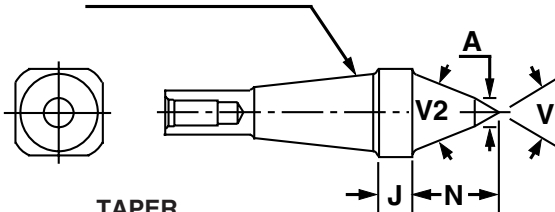
PIPE NOSE DEAD CENTER



_____ TAPER _____ A _____ B _____ C _____
E _____ J _____ K _____ P _____ V _____

MILL TAPER DEAD CENTER

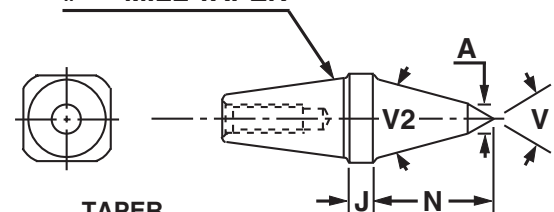
MILL TAPER



_____ TAPER _____
A _____ J _____ N _____ V _____ V2 _____

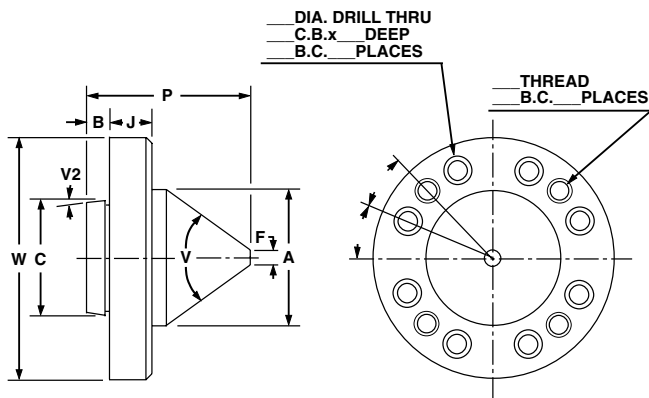
MILL TAPER DEAD CENTER

MILL TAPER



_____ TAPER _____
A _____ J _____ N _____ V _____ V2 _____

FLANGE CENTER



A _____ B _____ C _____ F _____ J _____
P _____ V _____ V2 _____ W _____

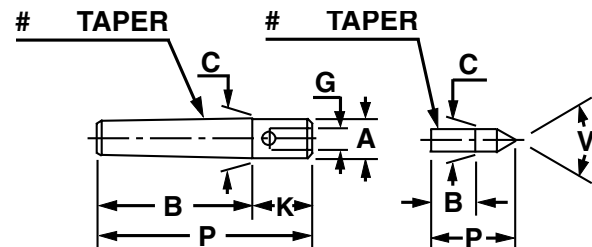
_____ DIAMETER DRILL THROUGH

_____ C. B. X _____ DEEP

_____ B. C. _____ PLACES

_____ THREAD _____ B. C. _____ PLACES

INTERCHANGEABLE POINT DEAD CENTER & SPECIAL POINTS



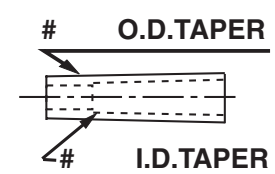
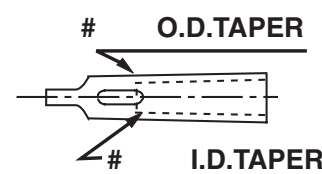
DEAD CENTER # _____ TAPER _____ A _____
B _____ C _____ G _____ K _____ P _____

SPECIAL POINT # _____ TAPER _____

B _____ C _____ P _____ V _____

SLEEVE WITH TANG

SLEEVE



FILL IN NUMBERS ON DIAGRAM



TECHNICAL INFORMATION

LIVE CENTERS

The “12” and “34” Series Super Accurate designs are ideally suited for low RPM grinding and lathe applications. This design, unique to Riten Industries, is capable of accuracies under 100 millionths. These centers need at least five pounds of thrust pressure applied to seat the bearings. Super Accurate centers are intended for use in applications where thrust pressures are nominal and RPM's are less than 1,000.

The “14”, “15”, “16” Series high-speed live centers are designed for CNC lathes and increasingly heavy part weights. Coolant deflectors extend the life of these accurate high-speed centers.

Riten “44”, “48”, “51”, “34” Heavy-Duty and “55” Extra Heavy-Duty Series live centers are designed for both lathes and grinders. Triple row bearing designs provide robust performance while the “51” Advantage, “34” Heavy-Duty and “55” extra heavy-duty Series have full length spindles and bigger bearings for heavier loads.

Our “46”, “49”, “65” and “56” Series are specialty centers. The “46” Series is designed for spline rolling applications. The “49” series has interchangeable points and can be used in CNC applications where weights and RPM's are within the factory limits of the center. The “65” Series pipe nose center is designed to run *thin wall* pipe and tubing at a wide range of RPM's. The “56” Heavy-Duty Series bull nose center also runs pipe, and very heavy parts such as rolls, castings and other pieces with large center holes. The heavy-duty bull nose has heavier bearings and greater rigidity than a pipe nose center.

New items in this catalog include the following: The “40” Series light and X-light live centers for workpieces from 2 oz. to 10 lbs., the versatile “60” Series multi-use live centers, the “17” Series Concentric spring loaded and bell head live centers, and the “61” Series mill taper dead centers for Cincinnati machines.

SPECIALS

Part Numbers: Riten specials are all stamped with a unique part number which aids in identifying the center. For example, a 46103-A0097 is a standard 46103 spline rolling live center with a custom spindle.

In general, you can find basic information about a special by referring to its base part number in the catalog. For instance, the taper, bearing configuration, and some tool clearances for the 46103-A0097 are the same as the standard 46103.

ALL CENTERS

Ordering: To order a special, complete the diagram on page 37 or 38 that best describes the center you need or send a print. If you are already using a Riten standard that is similar to what you want, include that information as well. This information will help us select the bearing configuration best suited for your application. If you don't know which live center is the correct choice, be sure to include the **RPM, workpiece weight, tailstock thrust** and any other application data that will help us assist you in selecting the right center.

Point Angles: To assure proper engagement of the workpiece, Riten standard live and dead center points have a 60 degree, 15 minute included angle.

Materials: Riten uses the finest bearing quality steel to manufacture its centers and components. Riten live and dead center bodies and spindles are heat-treated. This insures hardness and wear-resistant properties needed for center points. This also allows for many regrindings, extending the center's life.

Bearing Life: When radial loads, axial loads and RPM are given for an application, the life hours of the live center can be accurately calculated. Using a live center with more capacity than needed is a safeguard against bearing failures due to overload and variances of application. Weights are based on 100 RPMs on 2,000 hours, using L10 life factor. If you are uncertain about an application or suspect that your workpiece weight or tailstock pressure will exceed the live center's capabilities, call Riten for technical support.

RITEN TECHNICAL SUPPORT

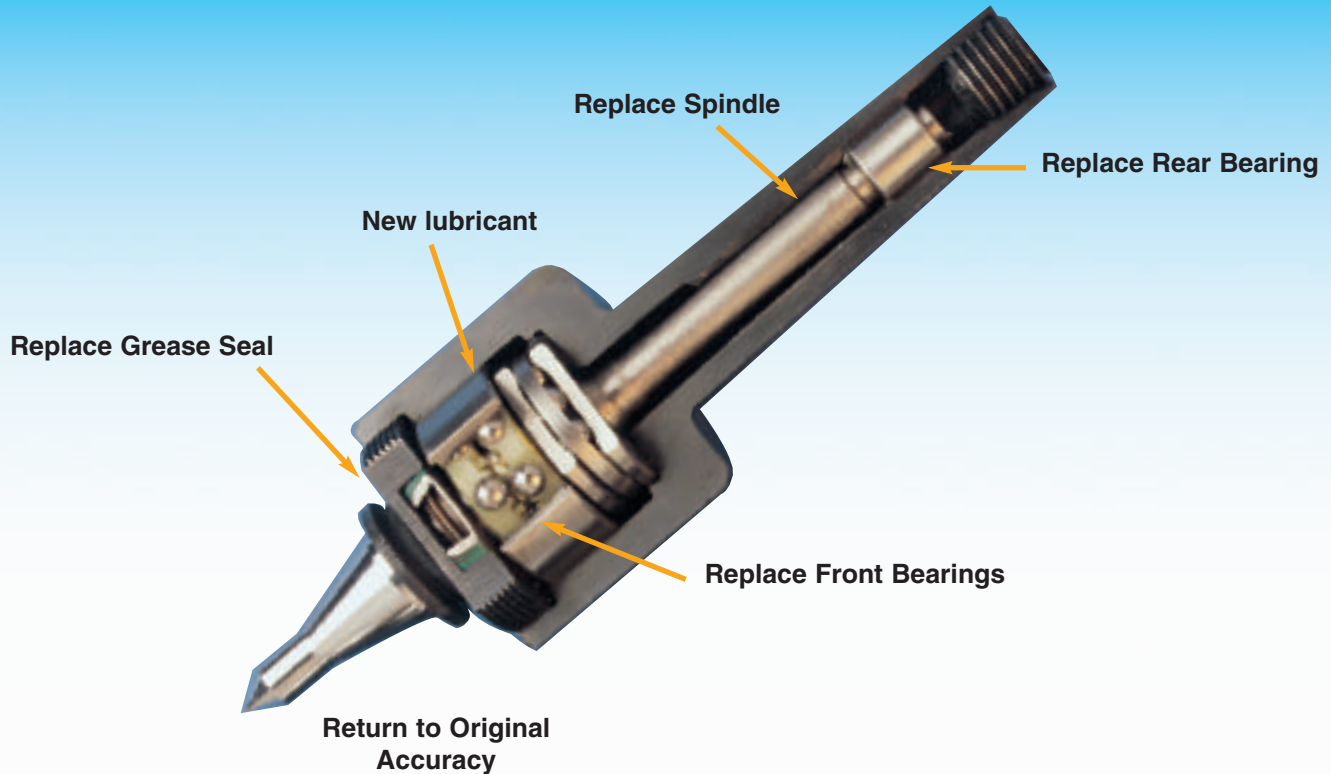
Please call our technical support department if you are not sure of the best center for your application. Our customer service personnel will be happy to help you select the correct center to fit your needs.

1-800-338-0027

Or look us up on our Web site:
<http://www.riten.com>



Extend the Life of Your Center



Once you select a Riten Live Center for its high degree of accuracy and dependability, we work to maintain that quality far beyond the normal life of average live centers. We want your investment in a Riten Live Center to be a great investment.

Riten Repair Program Saves You 60% of the Cost of a New Center

- Upon receipt, Riten Standard Live Centers will be rebuilt to "Like New" condition at 40% of the cost of a new center. This is total reconditioning which includes:
 - New spindle
 - New seal
 - Return to original accuracy
 - New bearings
 - New lubricant
 - Approximate two-week delivery

Riten 35% Trade-in Allowance

- If a Riten Standard Live Center is determined to be beyond practical repair, for any reason, a preferred customer trade-in allowance of 35% will be allowed toward the purchase of an equivalent new center at the time of purchase.

Repairs and Allowances on Other Brands

- Riten will repair most other manufacturers' centers or give you a trade-in allowance of up to 35% on a quotation basis.

Prices are subject to change without notice.



Center Survey Program



In response to a number of customer requests, Riten has developed an in-plant survey program that helps you gain control of live and dead center availability and cost.

An authorized Riten representative, together with the distributor of your choice, conducts a complete inventory of all centers at your plant. The result is a written report listing all centers found at your location, their condition, standardization suggestions, identification of duplicates, and

trade-in opportunities. This information is extremely valuable in making sure the right centers are on hand, streamlining your inventory, and cutting costs.

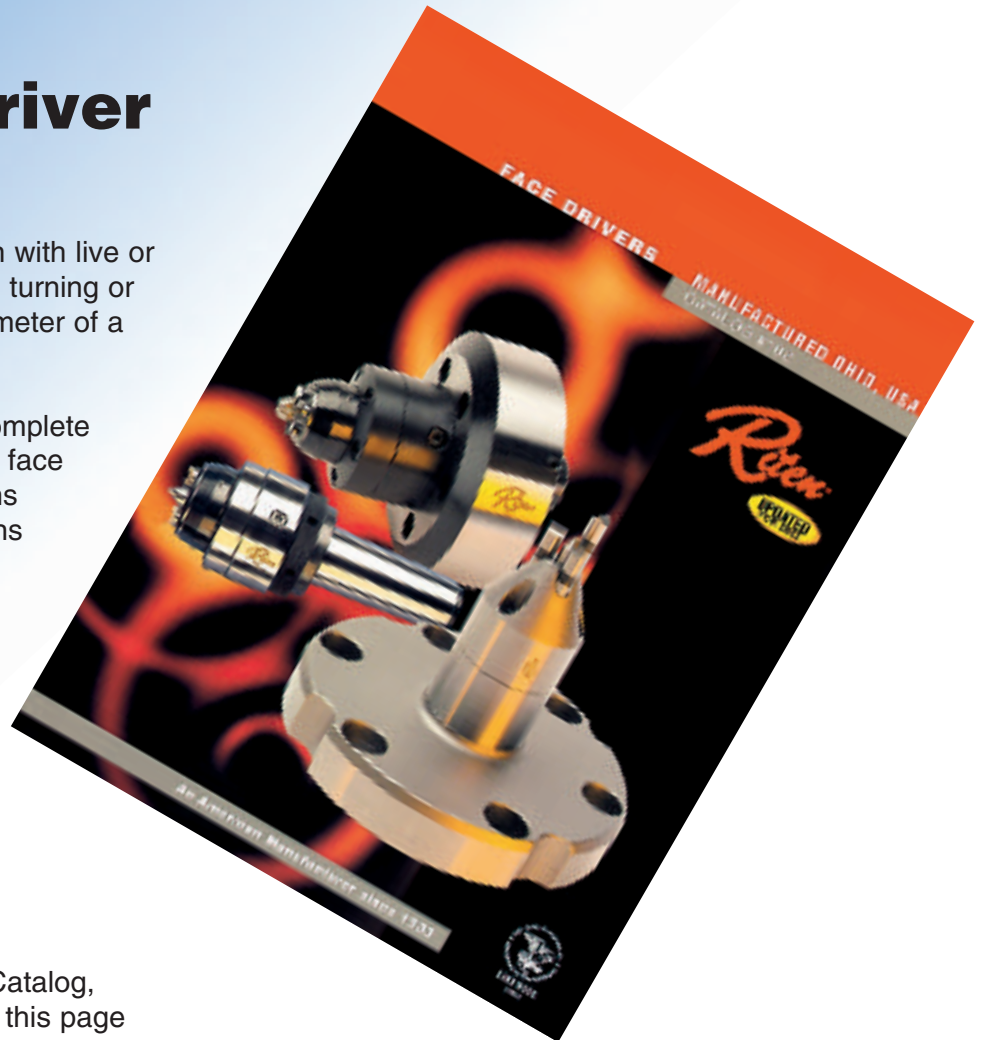
This program is **free** to qualified customers. To request a center survey, call Riten Customer Service at 1-800-338-0027, or log on to www.riten.com. Samples of previous customer surveys can be provided on request, or can be viewed at www.riten.com under Success Stories.



Free Face Driver Catalog

Face Drivers, used in conjunction with live or dead centers, allow the complete turning or grinding of the entire outside diameter of a workpiece in a single operation.

This 30-page catalog contains complete information on the advantages of face driving, and detailed specifications on Riten's seven hydraulic designs and ten mechanical models.



For your free Riten Face Driver Catalog, complete the form below and fax this page to **1-800-338-0717**, or view the complete catalog at **www.riten.com**.

NAME _____

TITLE _____

COMPANY _____

ADDRESS _____

CITY, STATE, ZIP _____

PHONE (_____) _____

E-MAIL _____



Why Riten means value in workholding products:

- The industry's largest selection of live & dead centers and face drivers
- Design and production of special centers to meet specific requirements
- Nationally known for superb engineering
- Same day shipping on standards; fast delivery on specials
- Exclusive free Center Survey Program for qualified customers
- Excellent repair program with generous trade-in allowances



Riten®

Quality workholding since 1933

Riten Industries, Inc.

1100 Lakeview Avenue ■ P.O. Box 340
Washington Court House, OH 43160 USA
740-335-5353 ■ FAX 740-335-4622
www.riten.com

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